# DENON

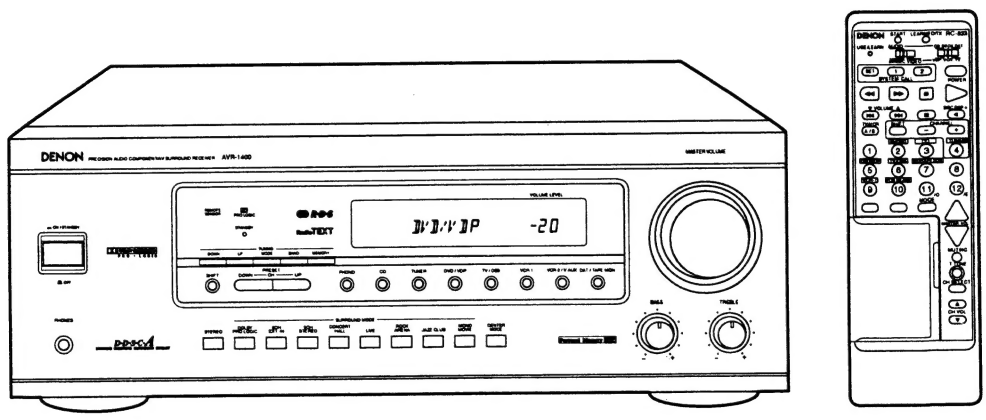
Hi-Fi AV Surround Receiver

For Europe and Asia Models

# SERVICE MANUAL

# MODEL AVR-1400/1420

## AV SURROUND RECEIVER



AVR-1420 has the accessories with wood board.

This service manual is supplement for Europe and Asia models. For servicing, refer to the service manual of AVR-1400 (For U.S.A./Canada model) already issued at the same time.

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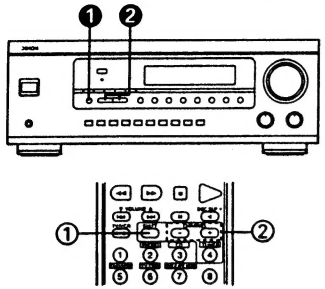
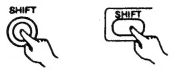
- In order to explain clearly, some illustrations using in this service manual may be slightly different from the actual set.


NIPPON COLUMBIA CO., LTD.

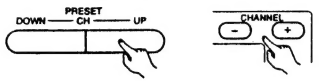
## Recalling preset stations



**1** Watching the display, press the SHIFT button to select the preset memory block.




**2** Watching the display, press the PRESET UP or DOWN button to select the desired preset channel.




## RDS (Radio Data System)

RDS (works only on the FM band) is a broadcasting service which allows station to send additional information along with the regular radio program signal.
The following three types of RDS information can be received on this unit:

### ■ Program Type (PTY)

PTY identifies the type of RDS program.
The program types and their displays are as follows:

| | | | | | |
|---|---|---|---|---|---|
| NEWS | News | DRAMA | Drama | ROCK M | Rock Music |
| AFFAIRS | Affairs | CULTURE | Culture | M. O. R. M | M.O.R. Music |
| INFO | Information | SCIENCE | Science | LIGHT M | Light Classical |
| SPORT | Sports | VARIED | Varied | CLASSICS | Serious Classical |
| EDUCATE | Education | POP M | Pop Music | OTHER M | Other Music |

### ■ Traffic Program (TP)

TP identifies programs that carry traffic announcements.
This allows you to easily find out the latest traffic conditions in your area before you leaving home.

### ■ Radio Text (RT)

RT allows the RDS station to send text messages that appear on the display.

**NOTE:**
- The operations described below using the RDS, TPY and RD buttons will not function in areas in which there are no RDS broadcasts.

## RDS search

Use this function to automatically tune to FM stations that provide RDS service.

**1** Set the input function to "TUNER".

Set the slide switch to "AUDIO".

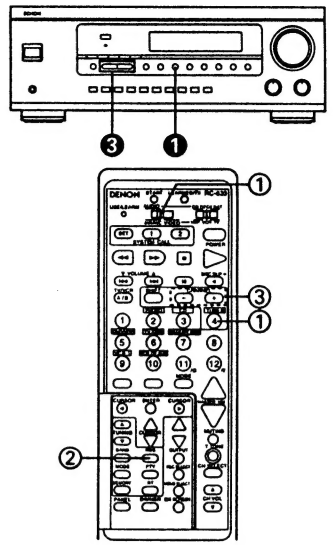

**2** Press the RDS button until "RDS SEARCH" appears on the display.


**3** Press the PRESET UP or DOWN button to automatically begin the RDS search operation.


If no RDS stations is found with above operation, all the reception band are searched.

**4** When a broadcast station is found, that station's name appears on the display.

**5** To continue searching, repeat step 3.
If no other RDS station is found when all the frequencies are searched, "NO RDS" is displayed.

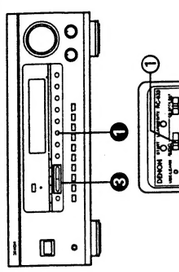


## TP search

Use this function to find RDS stations broadcasting traffic program (TP stations).

**1** Set the input function to "TUNER".

Set the slide switch to "AUDIO".




**2** Press the RDS button until "TP SEARCH" appears on the display.


**3** Press the PRESET UP or DOWN button TP search begins.


If no TP station is found with above operation, all the reception bands are searched.

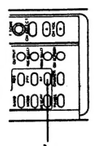
**4** The station name is displayed on the display after searching stops.

**5** To continue searching, repeat step 3.
If no other TP station is found when all the frequencies are searched, "NO PROGRAMME" is displayed.



## RT (Radio Text)

"RT" appears on the display when radio text data is received.
When the RT button is pressed while receiving an RDS broadcast station, the text data broadcast from the station is displayed. To turn the display off, press the RT button again. If no text data is being broadcast, "NO TEXT DATA" is displayed.

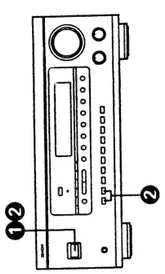



## 9 LAST FUNCTION MEMORY

- This unit is equipped with a last function memory which stores the input and output setting conditions as they were immediately before the power is switched off.
- The unit is also equipped with a back-up memory. This function provides approximately one week of memory storage when the main unit's power switch is off and with the power cord disconnected.

## 10 INITIALIZATION OF THE MICROPROCESSOR

When the indication of the display is not normal or when the operation of the unit does not shows the reasonable result, the initialization of the microprocessor is required by the following procedure.




**1** Switch off the unit using the main unit's POWER operation switch.

**2** Hold the following STEREO button and DOLBY PRO LOGIC button, and turn the main unit's POWER operation switch on.

**3** Check that the entire display is flashing with an interval of about 1 second, and release your fingers from the 2 buttons and the microprocessor will be initalized.

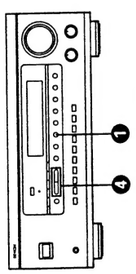


## PTY search

Use this function to find RDS stations broadcasting a designated program type (PTY).
For a description of each program type, refer to "Program Type (PTY)".

**1** Set the input function to "TUNER".

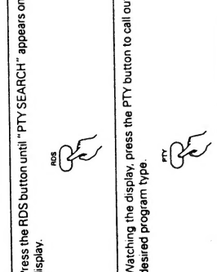
Set the slide switch to "AUDIO".




**2** Press the RDS button until "PTY SEARCH" appears on the display.


**3** Watching the display, press the PTY button to call out the desired program type.


**4** Press the PRESET UP or DOWN button to automatically begin the PTY search operation.




If there is no station broadcasting the designated program type with above operation, all the reception bands are searched.

**5** The station name is displayed on the display after searching stops.

**6** To continue searching, repeat step 4.
If no other station broadcasting the designated program type is found when all the frequencies are searched, "NO PROGRAMME" is displayed.



# NOTE FOR PARTS LIST

- Part indicated with the mark "⊙" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including Carbon Film ±5%, 1/4W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

**WARNING:**
Parts marked with this symbol ⚠ ▬ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

### ● Resistors

Ex.: RN (Type) 14K (Shape and performance) 2E (Power) 182 (Resistance) G (Allowable error) FR (Others)

| | | | |
|---|---|---|---|
| RD : Carbon<br>RC : Composition<br>RS : Metal oxide film<br>RW : Winding<br>RN : Metal film<br>RK : Metal mixture | 2B : 1/8W<br>2E : 1/4W<br>2H : 1/2W<br>3A : 1W<br>3D : 2W<br>3F : 3W<br>3H : 5W | F : ±1%<br>G : ±2%<br>J : ±5%<br>K : ±10%<br>M : ±20% | P : Pulse-resistant type<br>NL : Low noise type<br>NB : Non-burning type<br>FR : Fuse-resistor<br>F : Lead wire forming |

*** Resistance**

1 8 2 ⇒ 1800 ohm = 1.8 kohm
- 2: Indicates number of zeros after effective number.
- 1 8: 2-digit effective number.

• Units: ohm

1 R 2 ⇒ 1.2 ohm
- 1: 1-digit effective number.
- R 2: 2-digit effective number, decimal point indicated by R.

• Units: ohm

### ● Capacitors

Ex.: CE (Type) 04W (Shape and performance) 1H (Dielectric strength) 2R2 (Capacity) M (Allowable error) BP (Others)

| | | | |
|---|---|---|---|
| CE : Aluminum foil electrolytic<br>CA : Aluminum solid electrolytic<br>CS : Tantalum electrolytic<br>CQ : Film<br>CK : Ceramic<br><br>CC : Ceramic<br>CP : Oil<br>CM : Mica<br>CF : Metallized<br>CH : Metallized | 0J : 6.3V<br>1A : 10V<br><br>1C : 16V<br>1E : 25V<br>1V : 35V<br><br>1H : 50V<br>2A : 100V<br>2B : 125V<br>2C : 160V<br>2D : 200V<br>2E : 250V<br>2H : 500V<br>2J : 630V | F : ±1%<br>G : ±2%<br><br>J : ±5%<br>K : ±10%<br>M : ±20%<br><br>Z : +80% −20%<br>P : +100% −0%<br>C : ±0.25pF<br>D : ±0.5pF<br>= : Others | HS : High stability type<br><br>BP : Non-polar type<br><br>HR : Ripple-resistant type<br>DL : For change and discharge<br>HF : For assuring high frequency<br>U : UL part<br>C : CSA part<br>W : UL-CSA type<br>F : Lead wire forming |

*** Capacity (electrolyte only)**

2 2 2 ⇒ 2200μF
- 2: Indicates number of zeros after effective number.
- 2 2: 2-digit effective number.

• Units: μF.

2 R 2 ⇒ 2.2μF
- 1: 1-digit effective number.
- R 2: 2-digit effective number, decimal point indicated by R.

• Units: μF.

*** Capacity (except electrolyte)**

2 2 2 ⇒ 2200pF=0.0022μF
- 2: Indicates number of zeros after effective number.
- 2 2 (More than 2): 2-digit effective number.

• Units: μF.

2 2 1 ⇒ 220pF
- 1 (0 or 1): Indicates number of zeros after effective number.
- 2 2: 2-digit effective number.

• Units: pF.

• When the dielectric strength is indicated in AC, "AC" is included after the dieelectric strength value.

# ADDENDUM PARTS LIST OF P.W.BOARD

## 1U-3063 AUDIO IN DISP . UNIT

| Ref. No. | U.S.A. Model | | Europe Model | | Asia Model | | Taiwan R.O.C Model | | |
|---|---|---|---|---|---|---|---|---|---|
| | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Remarks |
| | 1U-3063 | Audio in disp p.w.b. unit | 1U-3063A | Audio in disp p.w.b. unit | 1U-3063A | Audio in disp p.w.b. unit | 1U-3063 | Audio in disp p.w.b. unit | |
| R601,602 | 247 0018 905 | Carbon chip 0 ohm 1/10W ±10% | 247 0007 974 | Carbon chip 1.3 kohm 1/10W ±5% | 247 0007 974 | Carbon chip 1.3 kohm 1/10W ±5% | 247 0018 905 | Carbon chip 0 ohm 1/10W ±10% | |
| C205,206 | 253 4537 924 | Ceramic 33 pF/50V ±5% | 253 1179 987 | Ceramic 470 pF/50V ±10% | 253 1179 987 | Ceramic 470 pF/50V ±10% | 253 4537 924 | Ceramic 33pF/50V ±10% | |
| C617~626 | — | — | 257 0005 986 | Ceramic chip 330 pF/50V ±5% | 257 0005 986 | Ceramic chip 330pF/50V ±5% | — | — | |
| LF601,602 | — | — | 235 9003 002 | FTZ choke coil | 235 9003 002 | FTZ choke coil | — | — | |

## 1U-3064 TU VR VIDEO UNIT

| Ref. No. | U.S.A. Model | | Europe Model | | Asia Model | | Taiwan R.O.C Model | | |
|---|---|---|---|---|---|---|---|---|---|
| | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Remarks |
| | 1U-3064 | TU VR video p.w.b. unit | 1U-3064B | TU VR video p.w.b. unit | 1U-3064A | TU VR video p.w.b. unit | 1U-3064E | TU VR video p.w.b. unit | |
| C518 | — | — | 257 0005 960 | Ceramic chip 270 pF/50V ±5% | — | — | — | — | |
| C519 | — | — | 257 0004 961 | Ceramic chip 100 pF/50V ±5% | — | — | — | — | |
| C527 | 254 4260 948 | Electrolytic 1 µ/50V ±20% | 254 4260 922 | Electrolytic 0.33 µF/50V ±20% | 254 4260 922 | Electrolytic 0.33 µ/50V ±20% | 254 4260 922 | Electrolytic 0.33 µ/50V ±20% | |
| C536 | 257 0004 961 | Ceramic chip 100 pF/50V ±5% | — | — | 257 0004 961 | Ceramic chip 100 pF/50V ±5% | 257 0004 961 | Ceramic chip 100 pF/50V ±5% | |
| C537 | — | — | 254 4254 912 | Electrolytic 22 µF/16V ±20% | — | — | — | — | |
| C539,540 | 257 0006 972 | Ceramic chip 750 pF/50V ±5% | 257 0005 986 | Ceramic chip 330 pF/50V ±5% | 257 0006 930 | Ceramic chip 510 pF/50V ±5% | 257 0006 930 | Ceramic chip 510 pF/50V ±5% | |
| C564,565 | — | — | 257 0005 986 | Ceramic chip 330 pF/50V ±5% | 257 0005 986 | Ceramic chip 330 pF/50V ±5% | — | — | |
| C701,702 | — | — | 257 0005 986 | Ceramic chip 330 pF/50V ±5% | 257 0005 986 | Ceramic chip 330 pF/50V ±5% | — | — | |
| C707,708 | — | — | 257 0004 961 | Ceramic chip 100 pF/50V ±5% | 257 0004 961 | Ceramic chip 100 pF/50V ±5% | — | — | |
| C715,716 | — | — | 257 0005 986 | Ceramic chip 330 pF/50V ±5% | 257 0005 986 | Ceramic chip 330 pF/50V ±5% | — | — | |
| C729,730 | — | — | 257 0005 986 | Ceramic chip 330 pF/50V ±5% | 257 0005 986 | Ceramic chip 330 pF/50V ±5% | — | — | |
| CF501 | 261 0135 907 | Ceramic filter MA8 | 261 0146 006 | Ceramic filter FMCFSK107M2-A | 261 0135 907 | Ceramic filter MA8 | 261 0135 907 | Ceramic filter MA8 | |
| CF502 | 261 0136 906 | Ceramic filter MS2G | 261 0146 006 | Ceramic filter FMCFSK107M2-A | 261 0136 906 | Ceramic filter MS2G | 261 0136 906 | Ceramic filter MS2G | |
| IC501 | 216 0102 008 | Front end | 216 9013 004 | FM front end (U) S | 216 0102 008 | Front end | 216 0102 008 | Front end | |
| LF501 | — | — | 232 9010 009 | Antibirdie filter | — | — | — | — | |
| LF503,504 | — | — | 232 0085 004 | LPF | — | — | — | — | |
| R502 | — | — | 247 0018 905 | Carbon chip 0 ohm 1/10W ±10% | — | — | — | — | |
| R515 | 247 0005 905 | Carbon chip 100 ohm 1/10W ±5% | — | — | 247 0005 905 | Carbon chip 100 ohm 1/10W ±5% | 247 0005 905 | Carbon chip 100 ohm 1/10W ±5% | |
| R516 | 247 0007 945 | Carbon chip 1 kohm 1/10W ±5% | 247 0006 920 | Carbon chip 330 ohm 1/10W ±5% | 247 0007 945 | Carbon chip 1 kohm 1/10W ±5% | 247 0007 945 | Carbon chip 1 kohm 1/10W ±5% | |
| R517 | — | — | 247 0006 920 | Carbon chip 330 ohm 1/10W ±5% | — | — | — | — | |
| R535 | 247 0010 945 | Carbon chip 18 kohm 1/10W ±5% | 247 0011 928 | Carbon chip 39 kohm 1/10W ±5% | 247 0011 928 | Carbon chip 39 kohm 1/10W ±5% | 247 0011 928 | Carbon chip 39 kohm 1/10W ±5% | |
| R536 | 247 0018 905 | Carbon chip 0 ohm 1/10W ±10% | 247 0008 944 | Carbon chip 2.7 kohm 1/10W ±5% | 247 0018 905 | Carbon chip 0 ohm 1/10W ±10% | 247 0018 905 | Carbon chip 0 ohm 1/10W ±10% | |
| R544,545 | 247 0012 927 | Carbon chip 100 kohm 1/10W ±5% | 247 0012 969 | Carbon chip 150 kohm 1/10W ±5% | 247 0012 927 | Carbon chip 100 kohm 1/10W ±5% | 247 0012 927 | Carbon chip 100 kohm 1/10W ±5% | |
| R555,556 | 247 0009 927 | Carbon chip 5.6 kohm 1/10W ±5% | 247 0008 960 | Carbon chip 3.3 kohm 1/10W ±5% | 247 0009 927 | Carbon chip 5.6 kohm 1/10W ±5% | 247 0009 927 | Carbon chip 5.6 kohm 1/10W ±5% | |
| R575,576 | 247 0012 943 | Carbon chip 120 kohm 1/10W ±5% | 247 0012 998 | Carbon chip 200 kohm 1/10W ±5% | 247 0012 943 | Carbon chip 120 kohm 1/10W ±5% | 247 0012 943 | Carbon chip 120 kohm 1/10W ±5% | |
| R579 | 247 0018 905 | Carbon chip 0 ohm 1/10W ±10% | — | — | 247 0018 905 | Carbon chip 0 ohm 1/10W ±10% | 247 0018 905 | Carbon chip 0 ohm 1/10W ±10% | |
| R580,581 | 247 0018 905 | Carbon chip 0 ohm 1/10W ±10% | — | — | 247 0018 905 | Carbon chip 0 ohm 1/10W ±10% | 247 0018 905 | Carbon chip 0 ohm 1/10W ±10% | |
| R645 | — | — | 247 0009 985 | Carbon chip 10 kohm 1/10W ±5% | — | — | — | — | |
| R646 | — | — | 247 0009 927 | Carbon chip 5.6 kohm 1/10W ±5% | — | — | — | — | |
| R705 | 247 0006 962 | Carbon chip 470 ohm 1/10W ±5% | 247 0005 905 | Carbon chip 100 ohm 1/10W ±5% | 247 0005 905 | Carbon chip 100 ohm 1/10W ±5% | 247 0006 962 | Carbon chip 470 ohm 1/10W ±5% | |
| R706 | 247 0006 962 | Carbon chip 470 ohm 1/10W ±5% | 247 0005 905 | Carbon chip 100 ohm 1/10W ±5% | 247 0005 905 | Carbon chip 100 ohm 1/10W ±5% | 247 0006 962 | Carbon chip 470 ohm 1/10W ±5% | |
| R721,722 | 247 0006 962 | Carbon chip 470 ohm 1/10W ±5% | 247 0005 905 | Carbon chip 100 ohm 1/10W ±5% | 247 0005 905 | Carbon chip 100 ohm 1/10W ±5% | 247 0006 962 | Carbon chip 470 ohm 1/10W ±5% | |
| R737,738 | 247 0006 962 | Carbon chip 470 ohm 1/10W ±5% | 247 0005 905 | Carbon chip 100 ohm 1/10W ±5% | 247 0005 905 | Carbon chip 100 ohm 1/10W ±5% | 247 0006 962 | Carbon chip 470 ohm 1/10W ±5% | |
| R793~798 | 247 0018 905 | Carbon chip 0 ohm 1/10W ±10% | 247 0006 962 | Carbon chip 470 ohm 1/10W ±5% | 247 0006 962 | Carbon chip 470 ohm 1/10W ±5% | 247 0018 905 | Carbon chip 0 ohm 1/10W ±10% | |
| TR501 | — | — | 275 0074 902 | FET 2SK211-Y/GR | — | — | — | — | |

## 1U-3065 CONTROL POWER UNIT

| Ref. No. | U.S.A. Model | | Europe Model | | Asia Model | | Taiwan R.O.C Model | | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | |
| | 1U-3065 | Control power p.w.b. unit | 1U-3065B | Control power p.w.b. unit | 1U-3065A | Control power p.w.b. unit | 1U-3065A | Control power p.w.b. unit | |
| C165,166 | — | — | 257 0003 920 | Ceramic chip 27 pF/50V ±5% | — | — | — | — | |
| C167 | — | — | 254 4260 951 | Electrolytic 2.2 µF/50V ±20% | — | — | — | — | |
| C168 | — | — | 254 4193 905 | Electrolytic 10 µF/16V ±20% (SRA) | — | — | — | — | |
| C169 | — | — | 257 0006 943 | Ceramic chip 560 pF/50V ±5% | — | — | — | — | |
| C170 | — | — | 257 0012 966 | Ceramic chip 0.01 µF/50V +80, -20% | — | — | — | — | |
| C171 | — | — | 254 4254 909 | Electrolytic 10 µF/16V ±20% | — | — | | | |
| C186 | 257 0008 983 | Ceramic chip 1000 pF/50V ±10% | — | — | 257 0008 983 | Ceramic chip 1000 pF/50V ±10% | 257 0008 983 | Ceramic chip 1000 pF/50V ±10% | |
| C505,506 | 257 4537 924 | Ceramic 33 pF/50V ±5% | 253 1179 945 | Ceramic 220 pF/50V ±10% | 253 1179 945 | Ceramic 220 pF/50V ±10% | 253 4537 924 | Ceramic 33 pF/50V ±5% | |
| C509,510 | 254 4254 938 | Electrolytic 47 µF/16V ±20% | 254 4254 941 | Electrolytic 100 µF/16V ±20% | 254 4254 938 | Electrolytic 47 µF/16V ±20% | 254 4254 938 | Electrolytic 47 µF/16V ±20% | |
| C515,516 | 254 4260 993 | Electrolytic 22 µF/50V ±20% | 254 4254 938 | Electrolytic 47 µF/16V ±20% | 254 4260 993 | Electrolytic 22 µF/50V ±20% | 254 4260 993 | Electrolytic 22 µF/50V ±20% | |
| C535 536 | 253 4537 924 | Ceramic 33 pF/50V ±5% | 253 1179 945 | Ceramic 220 pF/50V ±10% | 253 1179 945 | Ceramic 220 pF/50V ±10% | 253 4537 924 | Ceramic 33 pF/50V ±5% | |
| C562 | 253 4537 924 | Ceramic 33 pF/50V ±5% | 253 1179 945 | Ceramic 220 pF/50V ±10% | 253 1179 945 | Ceramic 220 pF/50V ±10% | 253 4537 924 | Ceramic 33 pF/50V ±5% | |
| D101 | — | — | 276 0432 903 | Diode 1SS270A | — | — | — | — | |
| C111 | — | — | 262 1701 906 | IC SAA6579T | — | — | — | — | |
| C112 | — | — | 262 1929 908 | IC LC7074M-TE-R | — | — | — | — | |
| R149 | — | — | 247 0009 985 | Carbon chip 10 kohm 1/10W ±5% | — | — | — | — | |
| R196 | — | (Jumper) | | | 241 2400 924 | Carbon film 5.1 kohm 1/4W ±5% | 241 2400 924 | Carbon film 5.1 kohm 1/4W ±5% | |
| R197 | — | | — | (Jumper) | 241 2400 995 | Carbon film 10 kohm 1/4W ±5% | 241 2400 995 | Carbon film 10 kohm 1/4W ±5% | |
| R200 | — | — | 247 0009 985 | Carbon chip 10 kohm 1/10W ±5% | — | — | — | — | |
| X101 | — | — | 399 0178 007 | Crystal resonator 4.332 MHz | — | — | — | — | |
| X102 | — | — | 399 0191 903 | Ceramic resonator 4.00MHz | — | — | — | — | |

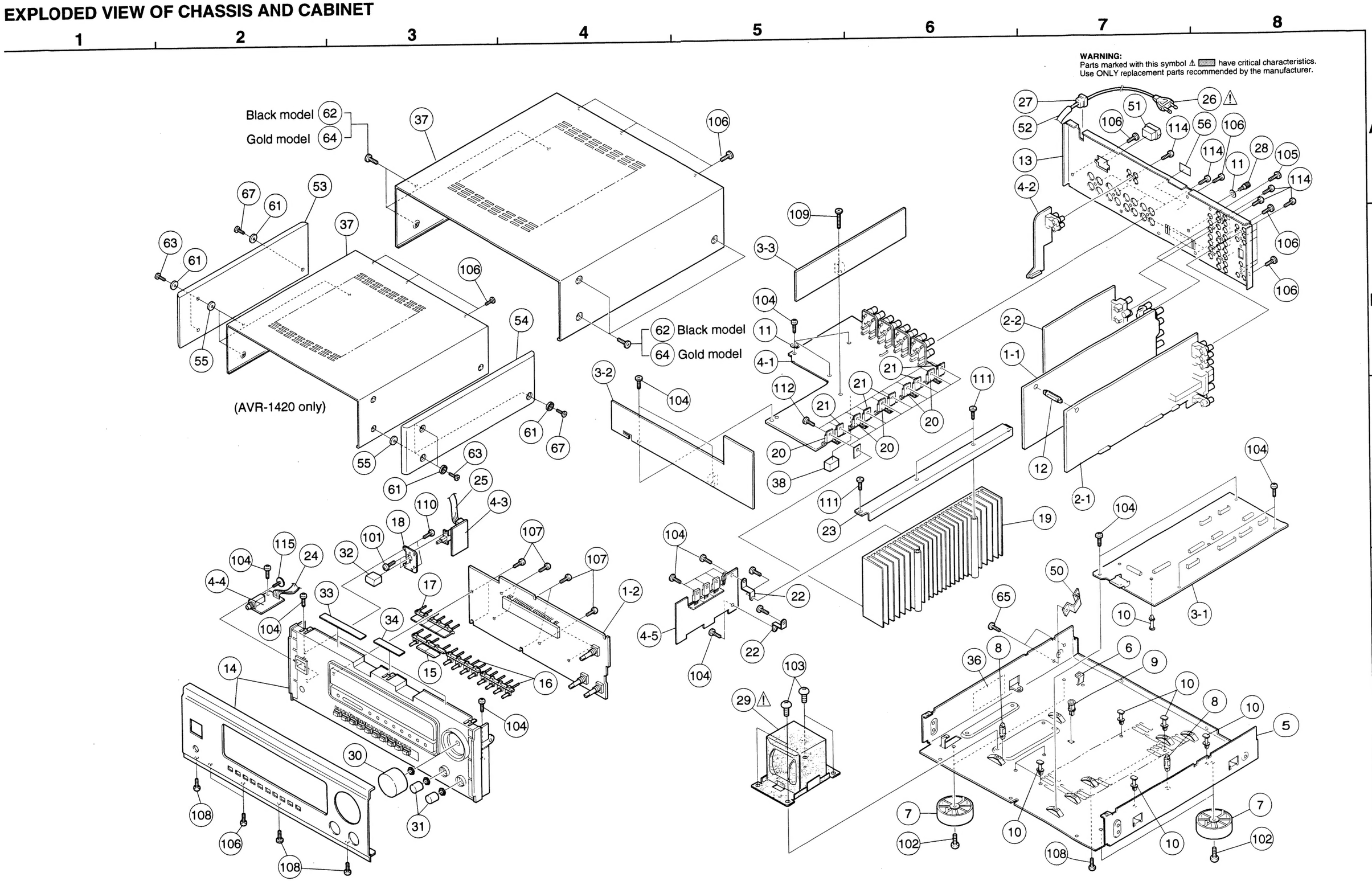
## 1U-3066 POWER AMP. UNIT

| Ref. No. | U.S.A. Model | | Europe Model | | Asia Model | | Taiwan R.O.C Model | | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | |
| | 1U-3066 | Power amp. p.w.b. unit | 1U-3066A | Power amp. p.w.b. unit | 1U-3066A | Power amp. p.w.b. unit | 1U-3066 | Power amp. p.w.b. unit | |
| ⚠ AC501 | 203 3976 002 | AC outlet (2P) | — | | — | | 203 3976 002 | AC outlet (2P) | |
| CX23 | — | — | 205 0581 001 | 2P VH connector base | 205 0581 001 | 2P VH connector base | — | — | |
| ⚠ F1 | 206 1046 001 | Fuse 6.3A | 206 1015 032 | Fuse 2.5A | 206 1015 032 | Fuse 2.5A | 206 1046 001 | Fuse 6.3A | |
| | — | — | 513 2585 074 | Fuse label | 513 2585 074 | Fuse label | — | — | for F1 |
| ⚠ F8 | 206 1046 014 | Fuse 8A | 206 1015 032 | Fuse 2.5A | 206 1015 032 | Fuse 2.5A | 206 1046 014 | Fuse 8A | |
| | — | — | 513 2585 074 | Fuse label | 513 2585 074 | Fuse label | — | — | for F8 |
| ⚠ F11,12 | 206 1039 063 | Fuse 2.0A | 206 1015 061 | Fuse 2A | 206 1015 061 | Fuse 2A | 206 1039 063 | Fuse 2.0A | |
| | — | — | 513 2585 032 | Fuse label | 513 2585 032 | Fuse label | — | — | for F11,12 |
| JK502 | 204 8264 013 | Head phone jack (NI) | 204 8264 013 | Head phone jack (NI) | 204 8264 071 | Head phone jack (gold) | 204 8264 013 | Head phone jack (NI) | |
| R734 | 242 2009 001 | Composition 2.2 Mohm 1/2W ±10% | — | — | — | — | 242 2009 001 | Composition 2.2 Mohm 1/2W ±10% | |
| T501 | 233 6073 000 | Power trans. (Mini)-EU | 233 6058 009 | Power trans. (Mini)-E2 | 233 6058 009 | Power trans. (Mini)-E2 | 233 6073 000 | Power trans. (Mini)-EU | |
| | | | 415 0299 000 | Condenser cover | 415 0299 000 | Condenser cover | — | — | or C648 |

## ADDENDUM PARTS LIST OF EXPLODED VIEW

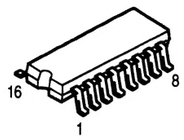
| Ref. No. | Part Name | Part No. | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | U.S.A. /Canada Black Model | Europe Black Model | Asia Black Model | Taiwan R.O.C Black Model | Europe Gold Model | Taiwan R.O.C Gold Model | Asia Gold Model (AVR-1420) |
| 13 | Back panel | 105 1260 209 | 105 1260 225 | 105 1260 225 | 105 1260 209 | 105 1260 225 | 105 1260 209 | 105 1260 238 |
| 14 | Inner panel ass'y | 146 2041 101 | 146 2041 169 | 146 2041 101 | 146 2041 101 | 146 2041 130 | 146 2041 172 | 146 2041 127 |
| 15 | Tuning knob | 113 1804 006 | 113 1804 006 | 113 1804 006 | 113 1804 006 | 113 1804 022 | 113 1804 019 | 113 1804 019 |
| 16 | Function knob | 113 1805 005 | 113 1805 005 | 113 1805 005 | 113 1805 005 | 113 1805 021 | 113 1805 018 | 113 1805 018 |
| 17 | Tuning-2 knob | 113 1823 100 | 113 1823 100 | 113 1823 100 | 113 1823 100 | 113 1823 126 | 113 1823 113 | 113 1823 113 |
| ⚠ 26 | AC cord | 206 2060 002 | 206 2063 009 | 206 2063 009 | 206 2060 002 | 206 2063 009 | 206 2060 002 | 206 2063 009 |
| 29 | Power trans | 233 6232 003 | 233 6240 008 | 233 6240 008 | 233 6232 003 | 233 6240 008 | 233 6232 003 | 233 6240 008 |
| 30 | VR. knob ass'y | 112 0744 067 | 112 0744 067 | 112 0744 067 | 112 0744 067 | 112 0744 054 | 112 0744 070 | 112 0744 070 |
| 31 | Knob (MARU) | 112 0685 100 | 112 0685 100 | 112 0685 100 | 112 0685 100 | 112 0685 168 | 112 0685 113 | 112 0685 113 |
| 32 | Pknob (P) ass'y | 113 9213 000 | 113 9213 000 | 113 9213 000 | 113 9213 000 | 113 9213 013 | 113 9213 039 | 113 9213 039 |
| 37 | Top cover | 102 0583 030 | 102 0583 030 | 102 0583 030 | 102 0583 030 | 102 0583 043 | 102 0583 043 | 102 0583 056 |
| 50 | Side bracket | — | 412 2955 107 | 412 2955 107 | — | 412 2955 107 | — | 412 2955 107 |
| ⚠ 51 | AC outlet (E2) | — | 203 3942 007 | 203 3942 007 | — | 203 3942 007 | — | 203 3942 007 |
| 52 | UL tube (8.3) | — | 415 0546 070 | 415 0546 070 | — | 415 0546 070 | — | 415 0546 070 |
| 53 | Wood board (L) | — | — | — | — | — | — | 101 2491 046 |
| 54 | Wood board (R) | — | — | — | — | — | — | 101 2492 045 |
| 55 | Felt sheet | — | — | — | — | — | — | 124 0032 015 |
| 56 | CE label | — | 513 2521 009 | — | — | 513 2521 009 | — | — |
| 57 | Rating label (T) | — | — | — | 513 2750 003 | — | 513 2750 003 | — |
| 58 | Serial No.sheet (T) | — | — | — | 513 2481 000 | — | 513 2481 000 | — |
| 59 | Caution label (T) | — | — | — | 513 2482 009 | — | 513 2482 009 | — |
| 60 | Side pad | — | — | — | — | — | — | 504 0159 013 |
| 61 | 5 Washer BKNI | — | — | — | — | — | — | 475 1006 016 |
| 62 | Screw 4X8 CBTS(B)-B-3P | 473 8064 000 | 473 8064 000 | 473 8064 000 | 473 8064 000 | — | — | — |
| 63 | Screw 4X25 CBTS (1) | — | — | — | — | — | — | 473 3809 011 |
| 64 | Screw 4X8 CBTS(B)-N-3P | — | — | — | — | 473 8064 013 | 473 8064 013 | — |
| 65 | Screw 3X8 CBTS (S)-B | — | 473 7015 018 | 473 7015 018 | — | 473 7015 018 | — | 473 7015 018 |
| 66 | Fixing screw | 477 0064 107 | — | — | 477 0064 107 | — | 477 0064 107 | — |
| 67 | Screw 3X8 CBTS (S)-B | — | — | — | — | — | — | 473 7007 039 |
| 153 | Cushion | 503 1236 107 | 503 1236 107 | 503 1236 107 | 503 1236 107 | 503 1236 107 | 503 1236 107 | 503 1252 107 |
| 155 | Instruction manual | 511 3182 001 | 511 3205 001 | 511 3182 001 | 511 3182 001 | 511 3205 001 | 511 3182 001 | 511 3182 001 |
| 158 | Remote controller RC-832 | 399 0458 002 | — | 399 0458 002 | 399 0458 002 | — | 399 0458 002 | 399 0458 002 |
| 158 | Remote controller RC-833 | — | 399 0459 001 | — | — | 399 0459 001 | — | — |
| 161 | Carton case | 501 1988 006 | 501 1988 006 | 501 1988 006 | 501 1988 006 | 501 1988 006 | 501 1988 006 | 501 1954 085 |
| 170 | KOLIN label (T) | — | — | — | 513 2641 086 | — | 513 2641 086 | — |
| 171 | Color label (gold) | — | — | — | — | 513 9111 001 | — | 513 9111 001 |
| 172 | CE label | — | 513 2521 009 | — | — | 513 2521 009 | — | — |
| 173 | Rating label (T) | — | — | — | 513 2750 003 | — | — | — |

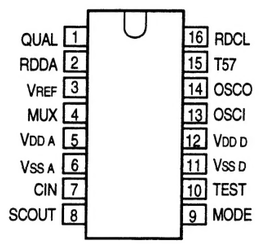
# EXPLODED VIEW OF CHASSIS AND CABINET



# ADDITIONAL SEMICONDUCTORS

**SAA6579T (CO: IC111)**

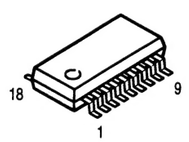


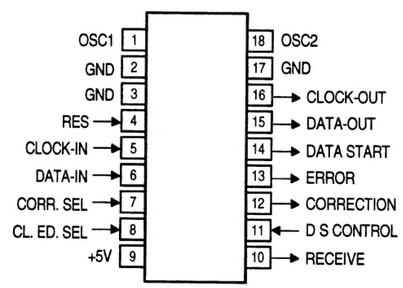




**SAA6579T Terminal Function**

| Pin No. | Symbol | Function |
|---|---|---|
| 1 | QUAL | Quality indication output. |
| 2 | RDDA | RDS data output. |
| 3 | Vref | Reference voltage output (0.5 VDD A). |
| 4 | MUX | Multiplex signal input. |
| 5 | VDD A | +5V power supply for analog part. |
| 6 | VSS A | Ground for analog part (0V). |
| 7 | CIN | Subcarrier input to comparator. |
| 8 | SCOUT | Subcarrier ouput of reconstruction filter. |
| 9 | MODE | Oscillation mode/test control input. |
| 10 | TEST | Test enable input. |
| 11 | VSS D | Ground for digital part (0V). |
| 12 | VDD D | +5V power supply for digital part. |
| 13 | OSCI | Oscillator input. |
| 14 | OSCO | Oscillator output. |
| 15 | T57 | 57kHz clock signal output. |
| 16 | RDCL | RDS clock output. |

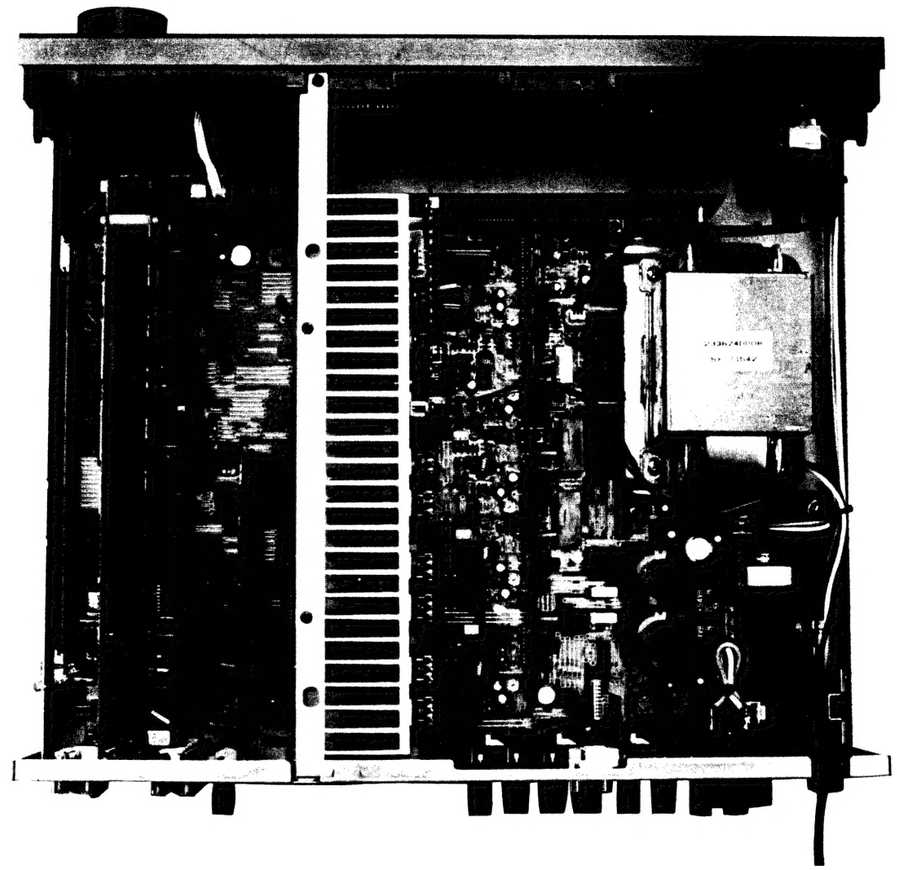
**LC7074M (CO: IC112)**




# WIRE ARRANGEMENT

In case of wires require unclasping or loosening to move the location to perform adjustment or part replacement, be sure to rearrange them neatly to restore properly in the same location as they were originally placed, or causing to produce a noise may occasionally occur.



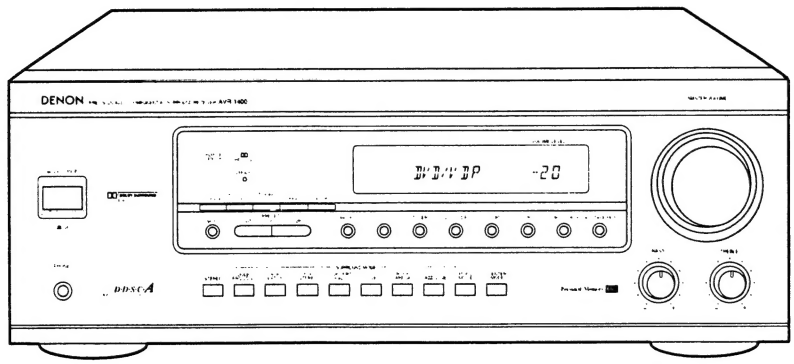
# DENON

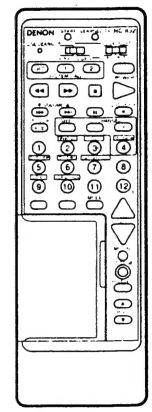
Hi-Fi AV Surround Receiver

# SERVICE MANUAL

# MODEL AVR-1400

## AV SURROUND RECEIVER





**— TABLE OF CONTENTS —**



**• In order to explain clearly, some illustrations using in this service manual may be slightly different from the actual set.**


**NIPPON COLUMBIA CO., LTD.**

• **SAFETY PRECAUTIONS**

**WARNING:**

**TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**

**CAUTION**
**RISK OF ELECTRIC SHOCK**
**DO NOT OPEN**

**CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

• **FOR U.S.A. & CANADA MODEL ONLY**

**CAUTION**

TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

• **POUR LES MODELE CANADIEN UNIQUEMENT**

**ATTENTION**

POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

• **安全事項**

**警告：**

為防着火或觸電，切勿讓本機遭雨淋濕或受潮。

**CAUTION**
**RISK OF ELECTRIC SHOCK**
**DO NOT OPEN**

**注意：為減少觸電危險，切勿拆下機殼（或機背）。機身內並無用戶修理用零件。請交由專業修理人員修理本機。**

三角形內有箭頭的閃電符號旨在提醒用戶，本產品機殼內有未經絶緣的"危險電壓"，其幅度足以使人觸電而發生危險。

三角形內加感嘆號旨在提醒用戶，有重要的操作與維修說明書配合本機。

**"SERIAL NO. _____**
**PLEASE RECORD UNIT SERIAL NUMBER ATTACHED TO THE REAR OF THE CABINET FOR FUTURE REFERENCE"**

**"NO. DE SERIE _____**
**PRIERE DE NOTER LE NUMERO DE SERIE DE L'APPAREIL INSCRIT A L'ARRIERE DU COFFRET DE FAÇON A POUVOIR LE CONSULTER EN CAS DE PROBLEME."**

**"序號 _____**
**請將來機背後所附序號記錄下來，以作參考之用。"**



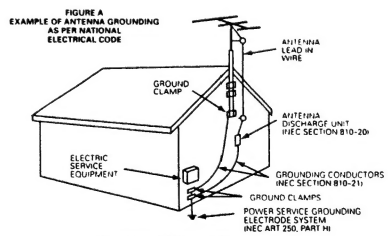


# SAFETY INSTRUCTIONS

1. Read Instructions – All the safety and operating instructions should be read before the appliance is operated.
2. Retain Instructions – The safety and operating instructions should be retained for future reference.
3. Heed Warnings – All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow Instructions – All operating and use instructions should be followed.
5. Water and Moisture – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.
6. Carts and Stands – The appliance should be used only with a cart or stand that is recommended by the manufacturer.

6A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

7. Wall or Ceiling Mounting – The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. Ventilation – The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
9. Heat – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
10. Power Sources – The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
11. Grounding or Polarization – Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.




12. Power-Cord Protection – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
14. Cleaning – The appliance should be cleaned only as recommended by the manufacturer.
15. Power Lines – An outdoor antenna should be located away from power lines.
16. Outdoor Antenna Grounding – If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna-discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure A.
17. Nonuse Periods – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
18. Object and Liquid Entry – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
19. Damage Requiring Service – The appliance should be serviced by qualified service personnel when:
    - A. The power-supply cord or the plug has been damaged; or
    - B. Objects have fallen, or liquid has been spilled into the appliance; or
    - C. The appliance has been exposed to rain; or
    - D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
    - E. The appliance has been dropped, or the enclosure damaged.
20. Servicing – The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

## TABLE OF CONTENTS



## TABLE DES MATIERES



## 目錄



### • ACCESSORIES

**Check that the following parts are included in addition to the main unit:**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ① Operating instructions | 1 | ② Warranty (for North American model only) | 1 | ③ Service station list | 1 | | | |
| ④ Remote control unit (RC-832) | 1 | ⑤ R6P/AA batteries | 2 | ⑥ AM loop antenna | 1 | ⑦ FM indoor antenna | 1 | ⑧ FM antenna adaptor | 1 |

### • ACCESSOIRES

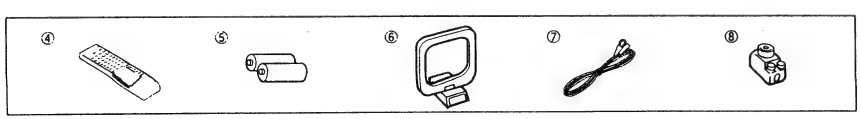
**Vérifier que les articles suivants sont inclus dans le carton en plus de l'unité principale:**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ① Mode d'emploi | 1 | ② Certificat de garantie (pour l'Amérique du Nord uniquement) | 1 | ③ Liste des centres d'entretien | 1 | | | |
| ④ Télécommande (RC-832) | 1 | ⑤ Piles R6P/AA | 2 | ⑥ Antenne-cadre AM | 1 | ⑦ Antenne intérieure FM | 1 | ⑧ Adaptateur d'antenne FM | 1 |

### • 配件

**除主機外，另附下列物品，請查檢：**

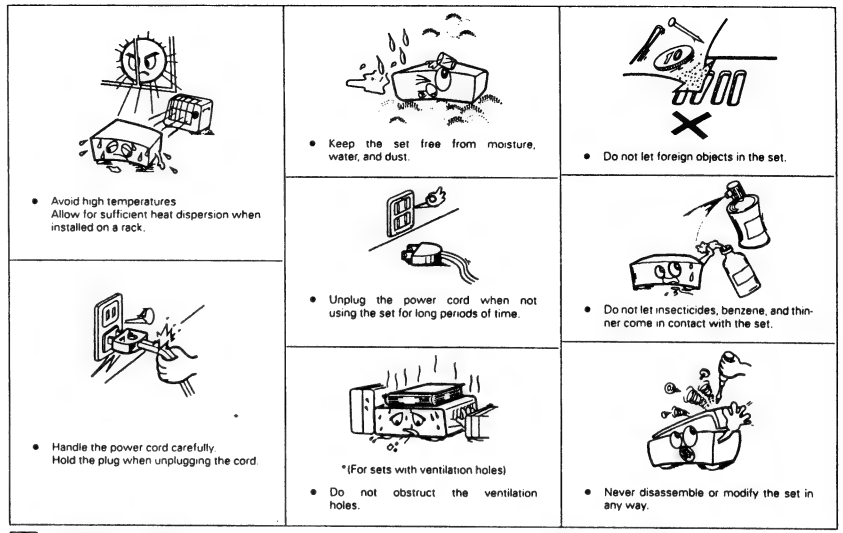
| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 操作說明書 | 1 | 2 保用証 (只限北美機型) | 1 | 3 維修站一覽表 | 1 | | | |
| 4 遙控器 (RC-832) | 1 | 5 R6P/AA電池 | 2 | 6 AM環形天線 | 1 | 7 FM室內天線 | 1 | 8 FM天線轉接器 | 1 |








## 1 NOTE ON USE




## 2 BEFORE USING

**Pay attention to the following before using this unit:**

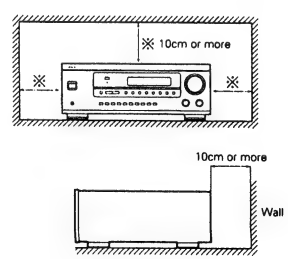
- **Moving the set**
  To prevent short circuits or damaged wires in the connection cords, always unplug the power cord and disconnect the connection cords between all other audio components when moving the set.
- **Before turning the power operation switch on**
  Check once again that all connections are proper and that there are not problems with the connection cords. Always set the power operation switch to the standby position before connecting and disconnecting connection cords.
- **Store this instructions in a safe place.**
  After reading, store this instructions along with the warranty in a safe place. Also fill in the items on the back page for your convenience.
- **Note that the illustrations in this instructions may differ from the actual set for explanation purposes.**

## 3 CAUTIONS ON INSTALLATION

Noise or disturbance of the picture may be generated if this unit or any other electronic equipment using microprocessors is used near a tuner or TV.
If this happens, take the following steps:

- Install this unit as far as possible from the tuner or TV.
- Set the antenna wires from the tuner or TV away from this unit's power cord and input/output connection cords.
- Noise or disturbance tends to occur particularly when using indoor antennas or 300 Ω/ohms feeder wires. **We recommend using outdoor antennas and 75 Ω/ohms coaxial cables.**

**For heat dispersal, leave at least 10 cm of space between the top, back and sides of this unit and the wall or other components.**



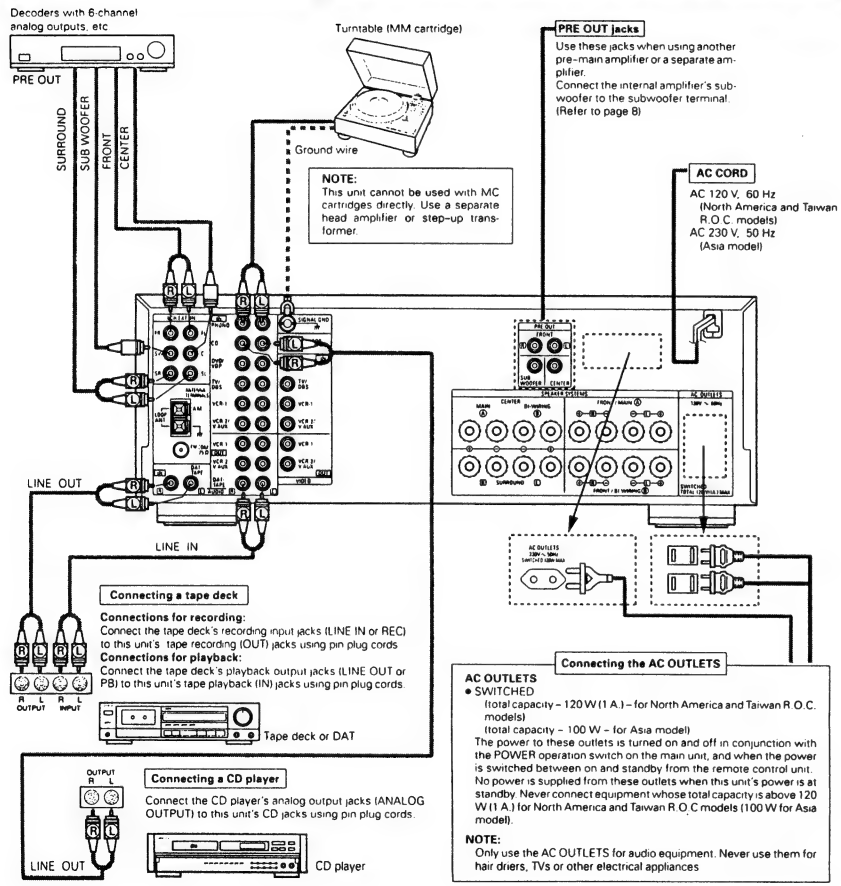

## 4 CAUTIONS ON HANDLING

- **Switching the input function when input jacks are not connected**
  A clicking noise may be produced if the input function is switched when nothing is connected to the input jacks. If this happens, either turn down the MASTER VOLUME control or connect components to the input jacks.
- **Muting of PRE OUT jacks**
  The PRE OUT jacks include a muting circuit. Because of this, the output signals are greatly reduced for several seconds after the power operation switch is turned on or input function, surround mode or any other set-up is changed. If the volume is turned up during this time, the output will be very high after the muting circuit stops functioning. Always wait until the muting circuit turns off before adjusting the volume.
- **Whenever the POWER operation switch is in the OFF state (see page 13), the apparatus is still connected on some AC line voltages.**
  **Please be sure to unplug the cord when you leave home for, say, a vacation.**

# 5 CONNECTIONS

- Do not plug in the power cord until all connections have been completed.
- Be sure to connect the left and right channels properly (left with left, right with right).
- Insert the plugs securely. Incomplete connections will result in the generation of noise.
- **Use the AC OUTLETS for audio equipment only. Do not use them for hair driers, etc.**
- Note that binding pin plug cords together with power cords or placing them near a power transformer will result in generating hum or other noise.
- Noise or humming may be generated if a connected audio equipment is used independently without turning the power of this unit on. If this happens, turn on the power of the this unit.

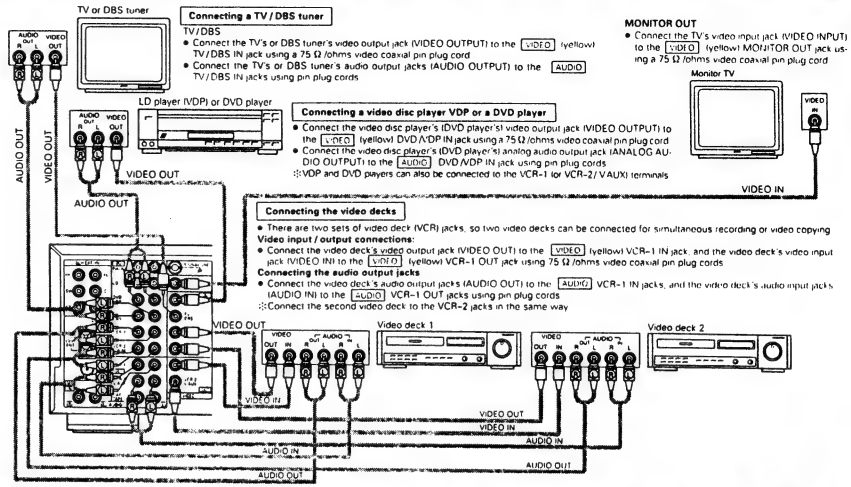
## Connecting the audio components



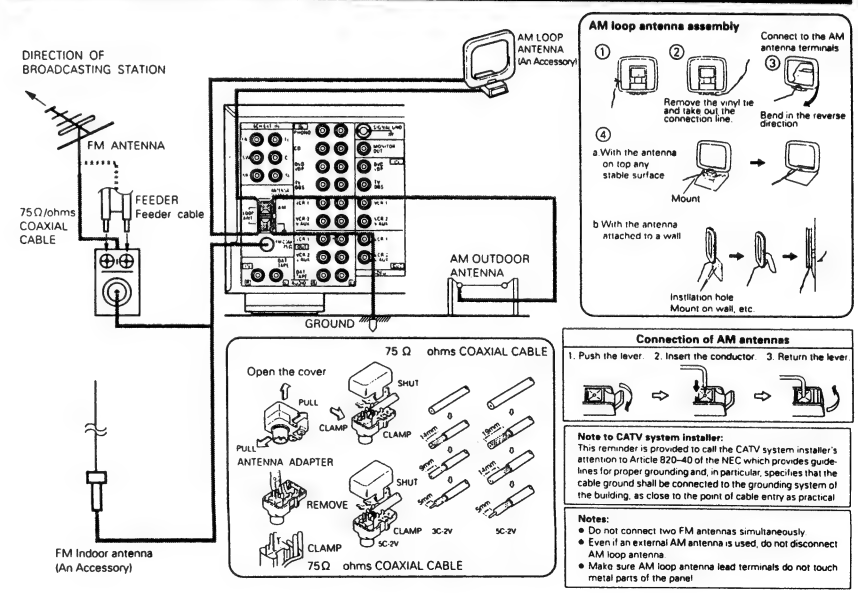



## Connecting the video equipments

To connect the video signal, connect using a 75 Ω/ohms video signal cable cord. Using an improper cable can result in a drop in video quality.




## Connecting the antenna terminals

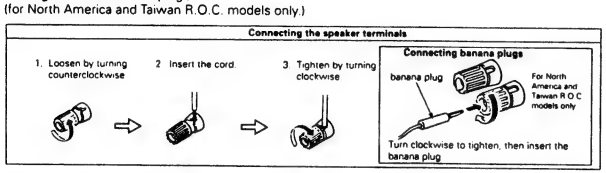


## Speaker system connections

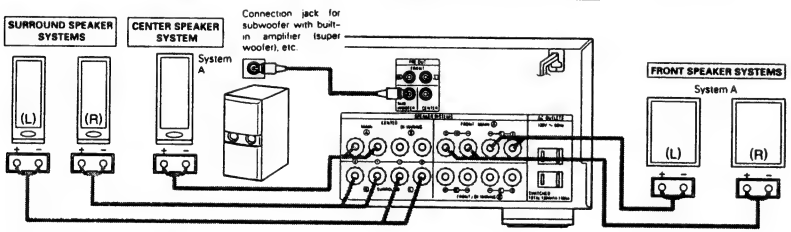
- Connect the speaker terminals with the speakers making sure that like polarities are matched ( ⊕ with ⊕ , ⊖ with ⊖ ). Mismatching of polarities will result in weak central sound, unclear orientation of the various instruments, and the sense of direction of the stereo being impaired.
- When making connections, take care that none of the individual conductors of the speaker cord come in contact with adjacent terminals, with other speaker cord conductors, or with the rear panel. Use banana plugs the speaker cords touch or if their core wire is thick and it is difficult to connect the cord to the speaker terminal. (In this case as well, pay attention to the treatment of the conductor sticking out of the banana plug.)
(for North America and Taiwan R.O.C. models only.)

**Speaker Impedance**

- When speaker systems A and B are use separately, speakers with an impedance of from 6 to 16 Ω/ohms can be connected for use as front and center speakers.
- Be careful when using two pairs of front or center speakers (A + B) at the same time, since use of speakers with an impedance of less than 12 Ω/ohms will lead to damage.
- Speakers with an impedance of 6 to 16 Ω/ohms can be connected for use as surround speakers.
- The protection circuit may operate or damage may occur when speakers with an impedance outside of the above range are used.



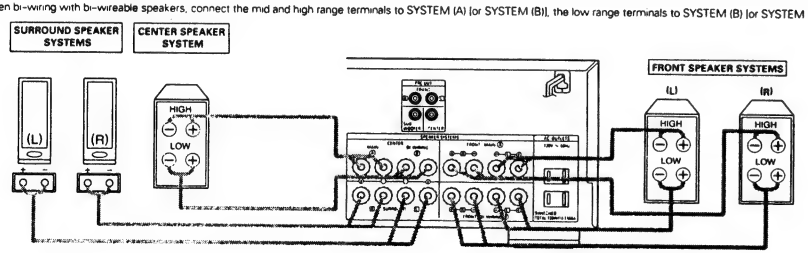

**• Precautions when connecting speakers**
If a speaker is placed near a TV or video monitor, the colors on the screen may be disturbed by the speaker's magnetism. If this should happen, move the speaker away to a position where it does not have this effect.




- About bi-wiring
If your speakers have bi-wiring terminals, you can achieve higher quality sound by adding cords and using bi-wiring, as shown on the diagram below.
- By connecting speaker systems to both the speaker A and B terminals, you can play the same music source simultaneously in different rooms. (Use speakers with impedances of 12 Ω/ohms.)

**Bi-wiring procedure**

SPEAKER SYSTEM (BI-WIRING)
When bi-wiring with bi-wireable speakers, connect the mid and high range terminals to SYSTEM (A) [or SYSTEM (B)], the low range terminals to SYSTEM (B) [or SYSTEM (A)].




### Protector circuit

This set has a built-in high speed protector circuit which protects the internal circuitry from strong currents that may be generated if the speakers are used with their cords insecurely connected to the speaker terminals or if the cords are short-circuited, and when the internal temperature becomes abnormally high due to blocked ventilation holes or continuous high power conditions while using speakers other than the specified ones.
If this protector circuit is activated, the speaker output is automatically cut off, the display turns off and the STANDBY LED flashes rapidly. If this should happen, be sure to turn off the set's power, then check the speaker cord connections, remove the object blocking the ventilation holes, or replace the speakers with speakers with impedances within the specified range before turning the power back on. The sound will be muted for several seconds, after which the set will operate normally.

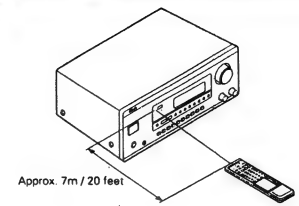




## 6 REMOTE CONTROL UNIT

**Following the procedure outlined below, insert the batteries before using the remote control unit.**

### Range of operation of the remote control unit



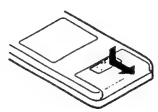

Point the remote control unit at the remote control sensor as shown on the diagram at the left.

**NOTES:**

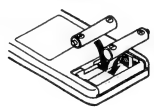
- The remote control unit can be used from a straight distance of approximately 7 meters/20 feet, but this distance will shorten or operation will become difficult if there are obstacles between the remote control unit and the remote control sensor, if the remote control sensor is exposed to direct sunlight or other strong light, or if operated from an angle.
- Neon signs or other devices emitting pulse-type noise nearby may result in malfunction, so keep the set as far away from such devices as possible.

### Inserting the batteries

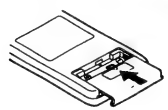
① Press as shown by the arrow and slide off.



② Insert the SUM3 batteries properly, as shown on the diagram.



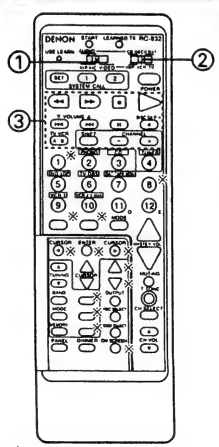
③ Close the lid.



**NOTES:**

- Use only AA, R6P, UM-3 batteries for replacement.
- Be sure the polarities are correct. (See the illustration inside the battery compartment.)
- Remove the batteries if the remote control transmitter will not be used for an extended period of time.
- If batteries leak, dispose of them immediately. Avoid touching the leaked material or letting it come in contact with clothing, etc. Clean the battery compartment thoroughly before installing new batteries.
- Have replacement batteries on hand so that the old batteries can be replaced as quickly as possible when the time comes.
- The codes that have been learned may be lost if removed batteries are not replaced within about 5 minutes.

### System code buttons

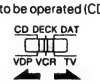



※ These buttons does not function. (Some buttons can be used by using the preset memory or the learning function.)

DENON remote-controllable audio components can be controlled using this unit's remote control unit. Note that some components, however, cannot be operated with this remote control unit.

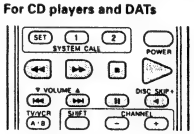
**1** Set to slide switch to "AUDIO" ("AVR/AVC").


**2** Set the slide switch to the position for the component to be operated (CD, DECK or DAT).



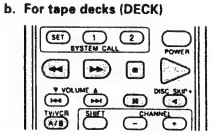

**3** Use the buttons shown below to operate the audio component.
For details, refer to the respective component's manual.

**a. For CD players and DATs**



| | |
|---|---|
| ◀◀, ▶▶ | : Manual search (reverse and forward) |
| ■ | : Stop |
| ▶ | : Play |
| ⏮, ⏭ | : Auto search |
| ⏸ | : Pause |
| DISC | : Disc selection |
| SKIP+ | : (CD changer only) |

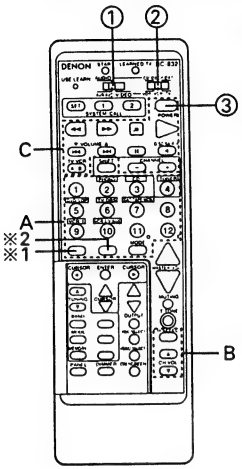
**b. For tape decks (DECK)**



| | |
|---|---|
| ◀◀ | : Reverse |
| ▶▶ | : Forward |
| ■ | : Stop |
| ▶ | : Forward play |
| ⏸ | : Pause |
| A/B | : A/B deck selection |
| ◀ | : Reverse play |

## Preset memory

DENON and other makes of components can be operated by setting the preset memory for your make of video component. **Operation is not possible for some models, however. In this case use the learning function (see page 11) to store the remote control signals.**
For instructions on clearing the presettings stored in the preset memory, see page 12.

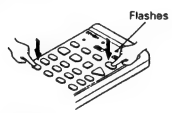



**1** Set the slide switch to "VIDEO".


**2** Set the slide switch to the component to be registered (VDP, VCR or TV).


( Keep the POWER button pressed in when performing steps 3 and 4. )

**3** Holding in the POWER button, press the button for the corresponding manufacturer in block A.
(Refer to Table 1.)




The LEARNED/TX LED flashes.

**4** Next, while holding in the POWER button, press the button for the code in block B. (Refer to Table 1.) The operation is completed when the LEARNED/TX LED lights.

**5** To continue registering other components, repeat steps 2 to 4.

This remote control unit can be used to operate components of other manufacturers without using the learning function by registering the manufacturer of the component as shown on Table 1.

**Table 1: Combinations of Personal System Codes for Different Manufacturers**

"VDP"

| A \ B | C+SELECT | C+VOL | C+VOL |
|---|---|---|---|
| ① | DENON A | DENON B | DENON C |
| ② (PHONO) | DENON (DVD) | — | — |
| ③ (CD) | MITSUBISHI | — | — |
| ④ (TUNER) | PANASONIC | — | — |
| ⑤ (DVD/VDP) | — | — | — |
| ⑥ (TV/DBS) | SONY A | SONY B | SONY C |
| ⑦ (DAT/TAPE MONO) | PIONEER | — | — |
| ⑧ | — | — | — |
| ⑨ (VCR-1) | — | — | — |
| ⑩ (VCR-2/V.AUX) | — | — | — |
| ⑪ / 0 | — | — | — |
| ⑫ / E | PHILIPS | — | — |
| ※1 | RCA | — | — |
| ※2 | — | — | — |
| MODE | MAGNAVOX | — | — |

"VCR"

| A \ B | C+SELECT | C+VOL | C+VOL |
|---|---|---|---|
| ① | — | — | — |
| ② (PHONO) | HITACHI A | HITACHI B | — |
| ③ (CD) | MITSUBISHI A | MITSUBISHI B | MITSUBISHI C |
| ④ (TUNER) | PANASONIC A | PANASONIC B | PANASONIC C |
| ⑤ (DVD/VDP) | JVC (VICTOR) A | JVC (VICTOR) B | JVC (VICTOR) C |
| ⑥ (TV/DBS) | SONY A | SONY B | SONY C |
| ⑦ (DAT/TAPE MON) | PIONEER | — | — |
| ⑧ | TOSHIBA A | TOSHIBA B | — |
| ⑨ (VCR-1) | SANYO A | SANYO B | — |
| ⑩ (VCR-2/V.AUX) | SHARP A | SHARP B | — |
| ⑪ / 0 | NEC A | NEC B | NEC C |
| ⑫ / E | PHILIPS A | PHILIPS B | PHILIPS C |
| ※1 | RCA A | RCA B | — |
| ※2 | GENERAL ELECTRIC A | GENERAL ELECTRIC B | — |
| MODE | MAGNAVOX A | MAGNAVOX B | MAGNAVOX C |

"TV"

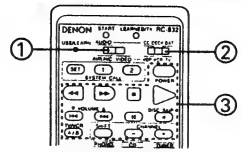
| A \ B | C+SELECT | C+VOL | C+VOL |
|---|---|---|---|
| ① | — | — | — |
| ② (PHONO) | DENON/HITACHI | — | — |
| ③ (CD) | MITSUBISHI A | MITSUBISHI B | — |
| ④ (TUNER) | PANASONIC A | PANASONIC B | — |
| ⑤ (DVD/VDP) | JVC (VICTOR) A | — | — |
| ⑥ (TV/DBS) | SONY | — | — |
| ⑦ (DAT/TAPE MON) | PIONEER | — | — |
| ⑧ | TOSHIBA A | — | — |
| ⑨ (VCR-1) | SANYO A | — | — |
| ⑩ (VCR-2/V.AUX) | SHARP | — | — |
| ⑪ / 0 | NEC A | — | — |
| ⑫ / E | PHILIPS A | — | — |
| ※1 | RCA A | — | — |
| ※2 | GENERAL ELECTRIC A | GENERAL ELECTRIC B | — |
| MODE | MAGNAVOX A | — | — |

**NOTES:**
- The signals for the pressed buttons are emitted while setting the preset memory. To avoid accidental operation, cover the remote control unit's transmitting window while setting the preset memory.
- Some models and years of manufacture of components of the manufacturers listed on Table 1 cannot be used.





## Operation after components are registered

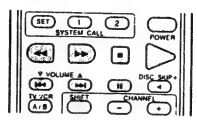



**1** Set the slide switch to "VIDEO".


**2** Set the slide switch to the component to be registered (VDP, VCR or TV).

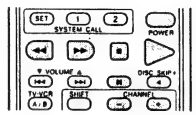

**3** Use the buttons shown below to operate the video component. (Some models cannot be used.)
For details, refer to the respective component's manual.

**a. VDP**



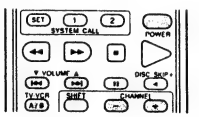
POWER : Power on/off
◀◀, ▶▶ : Manual search (reverse and forward)
■ : Stop
▶ : Play
I◀◀, ▶▶I : Auto search
II : Pause

**b. VCR**



POWER : Power on/off
◀◀, ▶▶ : Manual search (reverse and forward)
■ : Stop
▶ : Play
II : Pause
CHANNEL : Channel selection
+, −

**c. TV**

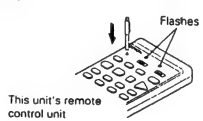


POWER : Power on/off
VOLUME : Volume up/down
▲, ▼
TV/VCR : TV/video selection
CHANNEL : Channel selection
+, −

## Remote control unit learning function

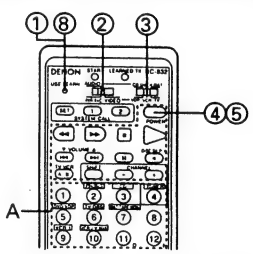
If your AV components are not DENON products or if operation is not possible with the preset memory settings, the components' remote control signals can be "learned" to enable remote control operation.
The buttons that can be "learned" are the CD, DAT and DECK system buttons (see page 9) and the VDP, VCR and TV system buttons (see page 11). (For the TV only, the A block buttons can also be "learned".)

**1** Press the USE/LEARN selector button with the tip of a pen etc., to set the learn mode. Both the START and LEARNED/TX indicators flash.

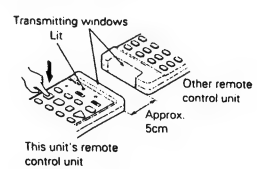



**2** Set the program switch to the side to be "learned".
Set to the AUDIO side for the CD, tape deck or DAT position, to the VIDEO side for the VDP, VCR or TV position.


**3** Set the program switch to the position to be "learned"

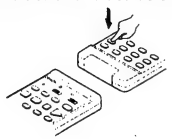

**4** Set the remote control units so they are facing each other, then press the button to be "learned" on this unit's remote control unit.



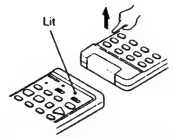
The indicator stops flashing and the START LED lights.
The learnable buttons are the buttons which can be operated with the DENON system codes for the CD player, DAT and tape deck, the buttons which can be operated with the preset memory for the VCR, VDP and TV. For the TV only, however, the buttons in the section indicated "A" on the diagram above can also be "learned". Use these to "learn" TV channels.

**NOTE:** Use button ⑪ / 0 as the 0 number button, button ⑫ / E as the enter button.

**5** Check that the START LED is lit, then press the button to be "learned" on the other remote control unit.



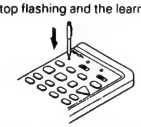
**6** Once the START LED turns off and the LEARNED / TX LED lights, release the button on the other remote control unit.




The two LEDs start flashing again.

**7** To "learn" other buttons, repeat steps 2 to 6.

**8** Once the learning operation is completed, press the USE / LEARN selector button again.
The two LEDs stop flashing and the learning mode is cancelled.



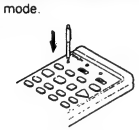
Check that the stored codes work properly.

**NOTES:**

- Up to 26 codes can be "learned", but this number may be lower if the codes are long.
- If a non-learnable button is pressed or two or more buttons are pressed at once, the two LEDs will once again light when the button(s) is released.
- If the codes could not be stored, the LEARNED / TX LED does not light after the START LED turns off. For limited number of models, codes cannot be stored in RC-832.
- If the two LEDs start flashing rapidly after the START LED lights, this means that the memory is already full, and the code you have just attempted to store was not stored.
  To "learn" that code, first perform the resetting operation.

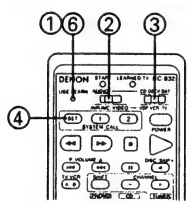
## Clearing "learned" remote control signals and the preset memory settings

**1** Press the USE / LEARN selector button with the tip of a pen, etc., to set the learn mode.



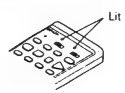
**2** To clear "learned" remote control signals, set the slide switch to the position at which the signals were "learned". To clear the preset memory settings, set the slide switch to "VIDEO".


**3** Set the slide switch to the position at which the signals were "learned" or at which the preset memory settings were set.


**4** Press the SYSTEM CALL SET button, and hold it in for at least four seconds.

**5** When both the START and LEARNED / TX LEDs light simultaneously, all the stored codes are cleared.




**6** Press the USE / LEARN selector button.

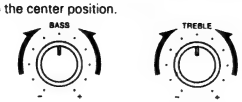


# 7 OPERATIONS

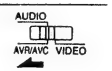
## Preparations for playback

**Preparations:**
Check that all connections are proper.

**1** Set to the center position.

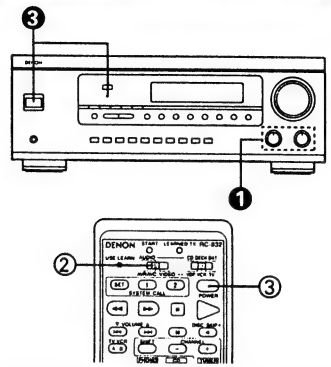



**2** Set the remote control unit's slide switch to the AUDIO position. (only when operating with the remote control unit)




**3** Turn on the power.
Press the POWER operation switch (button).

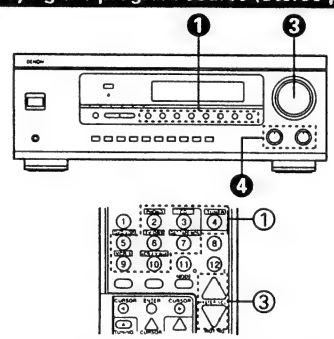

- ON/STANDBY
  The power turns on and "STANDBY" indicator is lit.
  Several seconds are required from the time the POWER operation switch is set to the " ON/STANDBY" position until sound is output. This is due to the built-in muting circuit that prevents noise when the POWER operation switch is turned on and off.



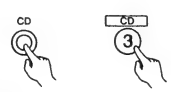

Set the POWER operation switch to this position to turn the power on and off from the included remote control unit (RC-832).

- OFF
  The power turns off and "STANDBY" indicator is off.
  In this position, the power cannot be turned on and off from the remote control unit.

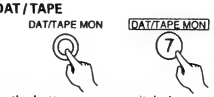
## Playing the program source (Stereo playback)




**1** Press the button for the program source to be played.
**EX 1: CD**



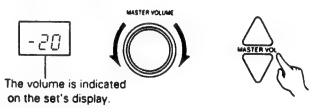

**EX 2: DAT / TAPE**




- Press the button once to switch the source to DAT / TAPE input, again to cancel DAT / TAPE input.

**2** Start playback on the selected component.
For operating instructions, refer to the various components' manuals.

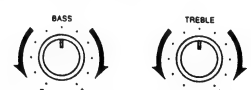
**3** Adjust the MASTER VOLUME control.




The volume is indicated on the set's display.

- The volume can be adjusted in units of 1 dB from −60 to 0 to +18 dB.

**4** Adjust the BASS and TREBLE.



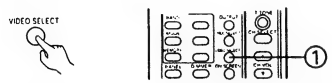

Turn the control clockwise to increase the bass or treble, counterclockwise to decrease it.

**NOTE:** The tone controls only affect the pre-out output and speaker output of the front left and front right channels.

## Simulcast playback

Use this switch to monitor a video source other than the audio source.

**1** Press the VIDEO SELECT button repeatedly until the desired source appears on the display.




The video source switches as follows each time the button is pressed:

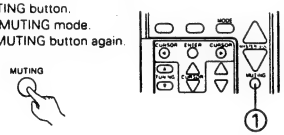
DVD/VDP → TV/DBS → VCR-1 → VCR-2/V-AUX → SOURCE (= VIDEO SELECT : OFF) →

※ Cancelling simulcast playback.
- Select "SOURCE" using the video select button.
- Switch the program source to the component connected to the video.

## Using the muting function

Use this to turn off the audio output temporarily.

**1** Press the MUTING button.
※ Cancelling MUTING mode.
Press the MUTING button again.

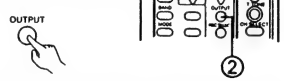



※ **Caution:** Switching off the power of the unit and the remote control unit will cancel the settings.

## Listen with headphones

**1** Connect the headphones to the PHONES jack of the front panel.


**2** Press the OUTPUT button to play the sound over the headphones only.




- The output to the speaker and pre-out jacks is turned off and no sound is produced from the speakers.

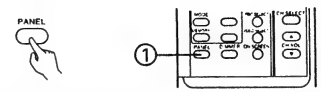
※ **Caution:** Switching off the power of the unit and the remote control unit will cancel the settings.



## Front panel display

When an operation is performed on the main unit or on the remote control unit, that operation appears on the display, making it possible to check the operation visually.
The set's operating status can also be checked on the display using the procedure described below.

**1** Press the PANEL button.

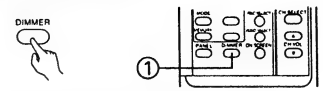



The input and output sources and the surround setting, etc., appear in order on the display each time the button is pressed.

## Using the dimmer function

Use this function to adjust the brightness of the main unit's display.

**1** Press the DIMMER button.




The brightness changes in the following order each time the button is pressed:

bright → medium → dim → display off →

## Recording the program source
### (recording the source currently being monitored)

**1** Follow steps 1 to 3 under "Playing the program source".

**2** Start recording on the tape or video deck.
For instructions, refer to the component's operating instructions.

**Simultaneous recording**
The signals of the source selected with the function selector button are output simultaneously to the DAT/TAPE and VCR 1 and 2 REC OUT jacks. If a total of three tape and/or video decks are connected and set to the recording mode, the same source can be recorded simultaneously on every decks.
In addition, if the TAPE MONITOR (DAT/TAPE) button is pressed, the audio signals from the tape deck are output to the VCR 1 and 2 AUDIO REC OUT jacks.

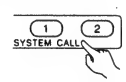
## System call (remote control unit)

This function allows you to preset frequently used operation patterns in the remote control unit then automatically send a series of up to ten remote control codes with a single button.

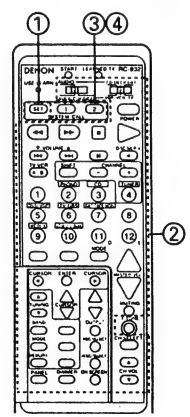
**1** **Presetting**
Press the SET button.


**2** Press the buttons for the codes to be sent, changing the position of the slide switch as necessary. (Up to ten buttons can be set.)
Buttons which have been "learned" and buttons which have been preset can also be selected.

**3** Press the SYSTEM CALL button ("1" or "2") at which you want to store the codes.
The setting is now stored.




**4** **Recalling**
Press the SYSTEM CALL button ("1" or "2") at which the desired codes have been stored.
The series of codes is now sent.

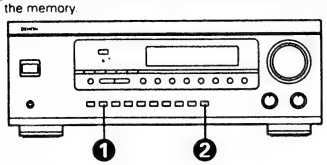



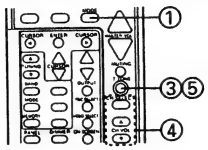
## 8 USING THE SURROUND FUNCTION

This unit is equipped with signal processing sections for decoding and reproducing movie soundtracks the same way as in movie theaters.

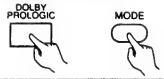
### Before playing with the surround function

Before playing with the surround function, be sure to use the test tones to adjust the playback level from the different speakers. This adjustment can be performed from the remote control unit, as described below.
Adjusting with the remote control unit using the test tones is only effective in the DOLBY PRO LOGIC mode. The adjusted levels are automatically stored in the memory.

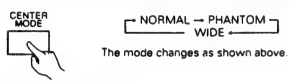



**1** Set the Dolby Pro Logic mode.

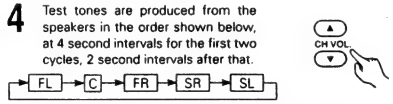



**2** Select the center mode.
(Refer to the description of the center mode below.)
Select the center mode according to the center speaker.




**3** Press the test tone button.


**4** Test tones are produced from the speakers in the order shown below, at 4 second intervals for the first two cycles, 2 second intervals after that.







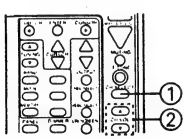
Use the channel volume adjust buttons to adjust so that the volume of the test tones is the same for all the speakers.

Press the channel select button to select the speaker to be adjusted, if necessary.


**5** After completing the adjustment, press the test tone button again.

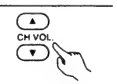

**NOTES:**
- When the center mode is set to Phantom, no test tones are output from the center speaker.
- When the center mode switch is pressed, the surround mode automatically switches to the DOLBY PRO LOGIC mode.

After adjusting using the test tones, adjust the channel levels either according to the playback sources or to suit your tastes, as described below.




**1** Press the channel select button to select the speaker to be adjusted.


**2** Adjust the level of the selected speaker.




### ■ Center Mode

Set the center mode as described below, according to the type of center speaker being used.

- **Normal mode:** This mode is suited for an arrangement in which the center channel speaker is smaller than the left and right speakers. Signals below 100 Hz which have almost no effect on directional orientation are distributed to the left and right channels, whereas the center channel output signals greater than 100 Hz. As a result, the bass of the left and right channels increases the apparent deepness of the sound.
- **Phantom mode:** Use this mode when center channel speaker is not used. A directional emphasis circuit provides signal reproduction which is electrically oriented to the center and this provides an exciting sound field for your enjoyment.
- **Wide mode:** This mode is suited for an arrangement in which the center channel speaker is of the same grade as the left and right speakers. The entire sound band from low region to high is output to the center channel to provide an exciting sound field for your enjoyment.

**NOTES:**
- The center mode applies to the DOLBY PRO LOGIC mode.
  The output from the center speaker is turned off if the center mode is set to the phantom mode in any surround mode other than Dolby Pro Logic.
- If a center speaker is added to the system afterwards or if the center speaker is changed, be sure to reset the center mode as described above.

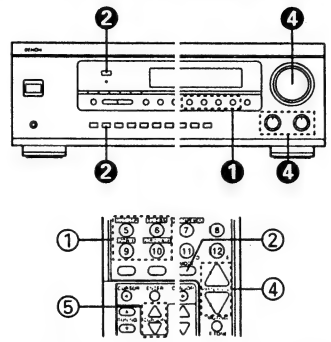


### Using the Dolby Pro Logic mode

### ■ DOLBY PRO LOGIC

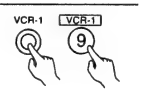
When using conventional video tapes, las r discs, TV programs or CDs with the DOLBY SURROUND mark, Dolby Pro Logic provides extremely natural sound movement and positioning, immersing you in the on s rean action. Pro Logic uses a directional emphasis circuit to decode four output channels (front left and right, center and surround) from the two audio channels provided on the software.
This set is equipped with three Dolby Pro Logic play modes: Normal, Phantom and Wide.

Play a pre-recorded source with the DOLBY SURROUND mark.




**1** Press the button for the program source to be played.

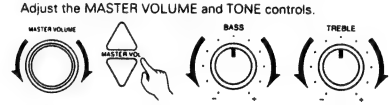
EX VCR-1




**2** Set the DOLBY PRO LOGIC mode.


**3** Start playback on the selected component.
For operating instructions, refer to the various components' manuals.

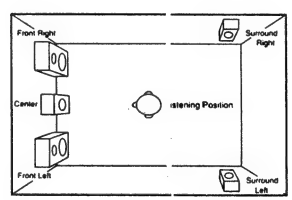
**4** Adjust the MASTER VOLUME and TONE controls.

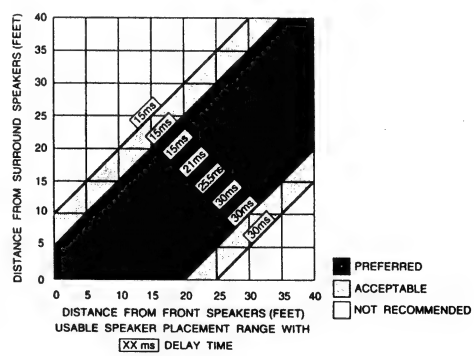



**5** Adjust the delay time and seating position as necessary. (Refer to the next chart.)
The cursor △ increases the DELAY TIME and the cursor ▽ decreases it.


### ■ DELAY TIME

The optimum delay time will differ de pending on the listening position. Referring to the chart below, set the optimum delay time for your room's space and seating position. For example, w hen the distance from the front speakers to the listening position is 20 feet and that from the surround speakers to the listening position is 15 feet, t ie optimum delay time will be 20 ms.
The variable range of the delay time differs depending on the mode.




Dolby Surround systems with Pro Logic decoding most closely replicate the Dolby Stereo theatrical experience. Only two surround speakers are necessary in the home listening environment to provide the same enveloping sound field as multiple surround speakers in the theater.

## Surround simulation

**■ Types of surround modes and their characteristics**

| | | |
|---|---|---|
| 1 | STEREO | Sound is produced from the two front channels. (Nothing is output from the Surround and center channels.) |
| 2 | 6CH EXT. IN | Connect the output of the external Dolby Digital decoder to this unit's 6CH EXT. IN. |
| 3 | 5CH STEREO | The signals of the left and right channels are distributed to the different speakers to achieve a stereo sound from all directions at the listening position. |
| 4 | CONCERT HALL | Use this setting to create the atmosphere of a concert hall. |
| 5 | LIVE | Use this setting to create the atmosphere of watching a live performance. |
| 6 | ROCK ARENA | The powerful reverberations of this mode produce a sound field which recreates the excitement of live concerts. This mode is effective for rock, popular music, etc. |
| 7 | JAZZ CLUB | This mode creates the sound field of a live house with a low ceiling and hard wall reverberations. The result is that the artist seems to be performing right before your eyes. |
| 8 | MONO MOVIE | In this mode, a sense of expansion is added to monaural audio sources. This mode is best suited for playing old movies or movie tapes recorded in monaural. |

※ Depending on the program source being played, the effect may not be very noticeable. In this case, try other surround modes, without worrying about their names, to create a sound field suited to your tastes.

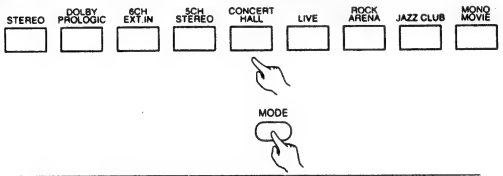
**Personal Memory Plus function .... for EASY USE**

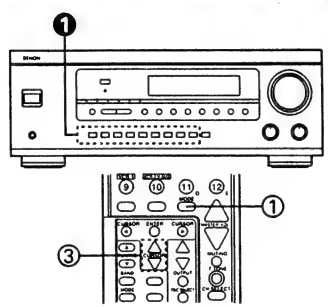
This unit automatically stores the surround mode adding selected effects for all input sources. The corresponding surround mode is recalled automatically each time an input source is selected.

## Using the surround simulation

**Preparations:** Select the input device and start playback.

**1** Select the surround mode according to the input source.




**2** If necessary, adjust the levels. Refer to page 16.

**3** 

Adjust the DELAY TIME to the desired settings.

**NOTES:**
- To listen to the signal of equipment that is connected to the "6CH EXT. IN" input jack, make sure the video input of the equipment is selecting the connected function and select "6CH EXT. IN" with the "6CH EXT. IN" mode button or with the remote control mode button.

**■ Surround modes and parameters**

The following table shows the presence or absence of signals in the various modes, and whether or not they can be controlled. Initial settings are indicated in parentheses.

| MODE | OUTPUT CHANNEL (0 dB) FRONT L/R | CENTER | SURROUND | SUBWOOFER | PARAMETER SOURCE CENTER MODE | TEST TONE | DELAY TIME |
|---|---|---|---|---|---|---|---|
| STEREO | ○ | × | × | ◇ | × | × | × |
| DOLBY PRO LOGIC | ○ | △ | ○ | ◇ | ○ | ○ | 15 ~ 30 msec (20 msec) 1 msec / step |
| 6CH EXT. IN | ○ | △ | ○ | ◇ | × | × | × |
| 5CH STEREO | ○ | △ | ○ | ◇ | × | × | × |
| CONCERT HALL | ○ | △ | ○ | ○ | × | × | |
| LIVE | ○ | △ | ○ | ○ | × | × | 6 ~ 33 msec (21 msec) 3 msec / step |
| ROCK ARENA | ○ | △ | ○ | ○ | × | × | |
| JAZZ CLUB | ○ | △ | ○ | ○ | × | × | |
| MONO MOVIE | ◇ | △ | ○ | ○ | × | × | |

○ : Signal present or controllable.
△, ◇ : Can be turned on and off according to the center mode setting.
× : No signal or not controllable.





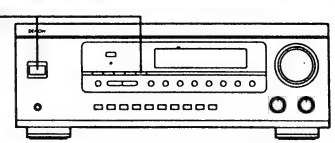
## 9 LISTENING TO THE RADIO

### Auto preset memory

This unit is equipped with a function for automatically searching for FM broadcast stations and storing them in the preset memory.

**1** Switch on the unit using the main unit's Power operation switch while holding in the MEMORY button. The unit automatically begins searching for FM broadcast stations

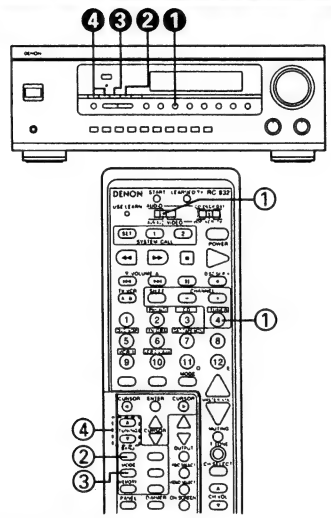

**2** When the first FM broadcast station is found, that station is stored in the preset memory at channel A1. Subsequent stations are automatically stored in order at preset channels A2 to A8, B1 to B8, C1 to C8, D1 to D8 and E1 to E8, for a maximum of 40 stations.



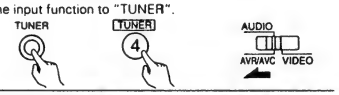

**3** Channel A1 is tuned in after the auto preset memory operation is completed.

**NOTES:**
- If an FM station cannot be preset automatically due to poor reception, use the "Manual tuning" operation to tune in the station, then preset it using the manual "Preset memory" operation.
- To interrupt this function, press the POWER operation button.

### Auto tuning

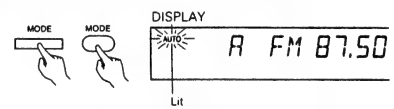



**1** Set the input function to "TUNER".

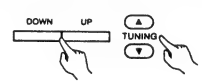



**2** Watching the display, press the BAND button to select the desired band (AM or FM).


**3** Press the MODE button to set the auto tuning mode.




**4** Press the TUNING UP or DOWN button.




- Automatic searching begins, then stops when a station is tuned in.

**NOTE:**
- When in the auto tuning mode on the FM band, the "STEREO" indicator lights on the display when a stereo broadcast is tuned in. At open frequencies, the noise is muted and the "TUNED" and "STEREO" indicators turn off.

### Manual tuning

**1** Set the input function to "TUNER".

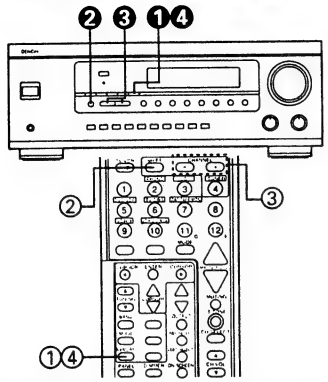
**2** Watching the display, press the BAND button to select the desired band (AM or FM).

**3** Press the MODE button to set the manual tuning mode. Check that the display's "AUTO" indicator turns off.

**4** Press the TUNING UP or DOWN button to tune in the desired station.
The frequency changes continuously when the button is held in.

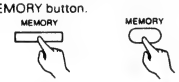
**NOTE:**
- When the manual tuning mode is set, FM stereo broadcasts are received in monaural and the "STEREO" indicator turns off.

## Preset memory




**Preparations:** Use the "Auto tuning" or "Manual tuning" operation to tune in the station to be preset in the memory.

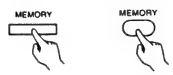
**1** Press the MEMORY button.




**2** Press the SHIFT button and select the desired memory block (A to E).

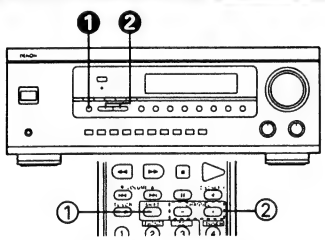

**3** Press the PRESET UP or DOWN button to select the desired preset channel (1 to 8).


**4** Press the MEMORY button again to store the station in the preset memory.



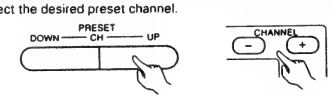

* To preset other channels, repeat steps 1 to 4.
A total of 40 broadcast stations can be preset — 8 stations (channels 1 to 8) in each of blocks A to E.

## Recalling preset stations




**1** Watching the display, press the SHIFT button to select the preset memory block.


**2** Watching the display, press the PRESET UP or DOWN button to select the desired preset channel.

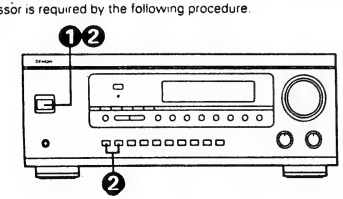



## 10 LAST FUNCTION MEMORY

- This unit is equipped with a last function memory which stores the input and output setting conditions as they were immediately before the power is switched off.
- The unit is also equipped with a back-up memory. This function provides approximately one week of memory storage when the main unit's power switch is off and with the power cord disconnected.

## 11 INITIALIZATION OF THE MICROPROCESSOR

When the indication of the display is not normal or when the operation of the unit does not shows the reasonable result, the initialization of the microprocessor is required by the following procedure.




**1** Switch off the unit using the main unit's POWER operation switch.

**2** Hold the following STEREO button and DOLBY PRO LOGIC button, and turn the main unit's POWER operation switch on.

**3** Check that the entire display is flashing with an interval of about 1 second, and release your fingers from the 2 buttons and the microprocessor will be initialized.





## 12 TROUBLESHOOTING

**If a problem should arise, first check the following:**

1. **Are the connections correct?**
2. **Have you operated the receiver according to the Operating Instructions?**
3. **Are the speakers, turntable, and other components operating properly?**

If this unit is not operating properly, check the items listed in the table below. Should the problem persist, there may be a malfunction. Disconnect the power immediately and contact your store of purchase.

| | Symptom | Cause | Measures | Page |
|---|---|---|---|---|
| Common problems arising when listening to the CD, records tapes, and FM broadcasts, etc. | DISPLAY not lit and sound not produced when POWER operation switch set to on. | • Power cord not plugged in securely. | • Check the insertion of the power cord plug.<br>• Turn the power on with the remote control unit after turning the POWER operation switch on. | 6<br>13 |
| | DISPLAY lit but sound not produced. | • Speaker cords not securely connected.<br>• Improper position of the audio function button.<br>• Volume control set to minimum.<br>• MUTING is on. | • Connect securely.<br>• Set to a suitable position.<br>• Turn volume up to suitable level.<br>• Switch off MUTING. | 8<br>13<br>13<br>14 |
| | DISPLAY is not displayed and the "STANDBY" LED flashes at a high rate. | • Speaker terminals are short-circuited.<br>• Block the ventilation holes of the set.<br>• The unit is operating at continuous high power conditions and/or inadequate ventilation. | • Switch power off, connect speakers properly, then switch power back on.<br>• Turn off the set's power, then ventilate it well to cool it down.<br>Once the set is cooled down, turn the power back on.<br>• Turn off the set's power, then ventilate it well to cool it down.<br>Once the set is cooled down, turn the power back on. | 8<br>5<br>5 |
| | Sound produced only from one channel. | • Incomplete connection of speaker cords.<br>• Incomplete connection of input/output cords. | • Connect securely.<br>• Connect securely. | 8<br>6, 7 |
| | Positions of instruments reversed during stereo playback. | • Reverse connections of left and right speakers or left and right input/output cords. | • Check left and right connections. | 6–8 |
| When playing records | Humming noise produced when record is playing. | • Ground wire of turntable not connected properly.<br>• Incomplete PHONO jack connection.<br>• TV or radio transmission antenna nearby. | • Connect securely.<br>• Connect securely.<br>• Contact your store of purchase. | 6<br>6<br>— |
| | Howling noise produced when volume is high. | • Turntable and speaker systems too close together.<br>• Floor is unstable and vibrates easily. | • Separate as much as possible.<br>• Use cushions to absorb speaker vibrations transmitted by floor. If turntable is not equipped with insulators, use audio insulators (commonly available). | —<br>— |
| | Sound is distorted. | • Stylus pressure too weak.<br>• Dust or dirt on stylus.<br>• Cartridge defective. | • Apply proper stylus pressure.<br>• Check stylus.<br>• Replace cartridge. | —<br>—<br>— |
| | Volume is weak. | • MC cartridge being used. | • Replace with MM cartridge or use a head amplifier or step-up transformer. | 6 |
| Remote control unit | This unit does not operate properly when remote control unit is used. | • Batteries dead.<br>• Remote control unit too far from this unit.<br>• Obstacle between this unit and remote control unit.<br>• Different button is being pressed.<br>• ⊕ and ⊖ ends of battery inserted in reverse. | • Replace with new batteries.<br>• Move closer.<br>• Remove obstacle.<br>• Press the proper button.<br>• Insert batteries properly. | 9<br>9<br>9<br>—<br>9 |

# SPECIFICATIONS

- **Audio section**
  **(Power amplifier)**
  **Rated output:**

| | | | |
|---|---|---|---|
| for North America model: | Front: | 65 W + 65 W | (8 Ω / ohms, 20 Hz ~ 20 kHz with 0.05% T.H.D.) |
| | Center: | 65 W | (8 Ω / ohms, 20 Hz ~ 20 kHz with 0.05% T.H.D.) |
| | Surround: | 65 W + 65 W | (8 Ω / ohms, 20 Hz ~ 20 kHz with 0.05% T.H.D.) |
| for Asia and Taiwan R.O.C. models: | Front: | 90 W + 90 W | (6 Ω / ohms, EIAJ) |
| | Center: | 90 W | (6 Ω / ohms, EIAJ) |
| | Surround: | 90 W + 90 W | (6 Ω / ohms, EIAJ) |

**Dynamic power:** 85 W × 2 ch (8 Ω / ohms)
145 W × 2 ch (4 Ω / ohms)
175 W × 2 ch (2 Ω / ohms)

| | | | |
|---|---|---|---|
| **Output terminals:** | Front / Center: | A or B or Bi-wiring | 6 to 16 Ω / ohms |
| | | A + B | 12 to 16 Ω / ohms |
| | Surround: | 6 to 16 Ω / ohms | |

**(Analog)**
**Line input (Each line input—FRONT PRE OUT)**

| | |
|---|---|
| **Input sensitivity / input impedance:** | 200 mV/47 kΩ / kohms |
| **Frequency response:** | 10 Hz ~ 50 kHz: +1, −3 dB |
| **Tone control range:** | BASS: ± 10 dB at 100 Hz |
| | TREBLE: ± 10 dB at 10 kHz |
| **S/N:** | 96 dB |
| **Distortion:** | 0.05% (20 Hz ~ 20 kHz) |
| **Rated output** | 1.2 V |
| **Maximum headphones output:** | 27 mW (8 Ω/ohms) |

**Phono equalizer (PHONO input —REC OUT)**

| | |
|---|---|
| **Input sensitivity:** | 2.5 mV / 47 kΩ/kohms |
| **RIAA deviation:** | ± 1 dB (20 Hz to 20 kHz) |
| **S/N:** | 74 dB (A weighting, with 5 mV input) |
| **Rated output / Maximum output** | 150 mV / 8 V |
| **Distortion factor:** | 0.03% (1 kHz, 3V) |

- **Video section**
  **(Standard video jacks)**

| | |
|---|---|
| **Input / output level and impedance:** | 1 Vp-p, 75 Ω / ohms |
| **Frequency response:** | 5 Hz ~ 10 MHz +1, −3 dB |

- **Tuner section**

| | **[FM]** (note: μV at 75 Ω/ohms, 0 dBf = 1 × $10^{-15}$ W) | | **[AM]** |
|---|---|---|---|
| **Receiving Range:** | 87.50 MHz ~ 107.90 MHz | | 520 kHz ~ 1710 kHz |
| | (for North America model) | | (for North America model) |
| | 87.50 MHz ~ 108.00 MHz | | 522 kHz ~ 1611 kHz |
| | (for Asia and Taiwan R.O.C. models) | | (for Asia and Taiwan R.O.C. models) |
| **Usable Sensitivity:** | 1.0 μV (11.2 dBf) | | 18 μV |
| **50 dB Quieting Sensitivity:** | MONO | 1.6 μV (15.3 dBf) | |
| | STEREO | 23 μV (38.5 dBf) | |
| **S/N: (IHF-A):** | MONO | 80 dB | 50 dB |
| | STEREO | 75 dB | |
| **Total Harmonic Distortion (at 1 kHz):** | MONO | 0.15% | |
| | STEREO | 0.3% | |

- **General**

| | |
|---|---|
| **Power supply:** | AC 120 V, 60 Hz (for North America and Taiwan R.O.C. models) |
| | AC 230 V, 50 Hz (for Asia model) |
| **Power consumption:** | 4.0 A (for North America model) |
| | 190 W (for Asia and Taiwan R.O.C. models) |
| **Maximum external dimensions:** | 434 (W) × 161 (H) × 416 (D) mm (17-3/32" × 6-11/32" × 16-3/8") (AVR-1400) |
| | 470 (W) × 162 (H) × 416 (D) mm (18-1/2" × 6-3/8" × 16-3/8") (AVR-1420) |
| **Weight:** | 10.6 kg (23 lbs 6 oz) (AVR-1400) |
| | 12.0 kg (26 lbs 7 oz) (AVR-1420) |

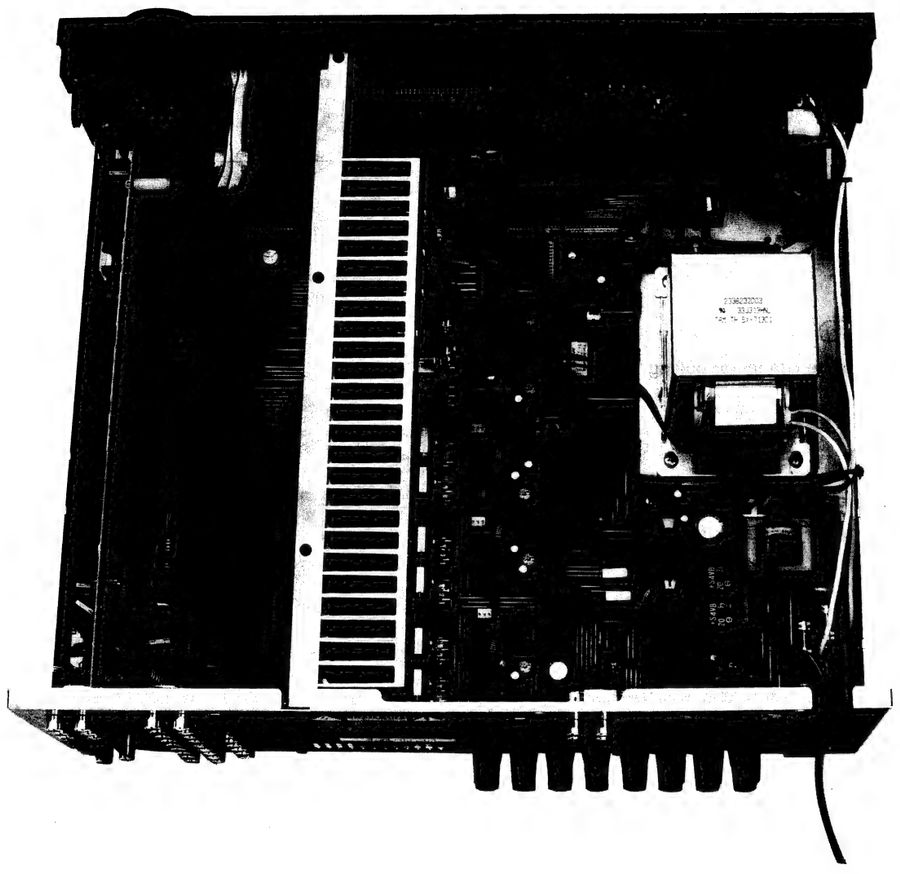
- **Remote control unit (RC-832)**

| | |
|---|---|
| **Batteries:** | R6P/AA Type (two batteries) |
| **External dimensions:** | 70 (W) × 215 (H) × 19 (D) mm (2-3/4" × 8-15/32" × 3/4") |
| **Weight:** | 180 g (Approx. 6 oz) (including batteries) |

* For purposes of improvement, specifications and design are subject to change without notice.

## WIRE ARRANGEMENT

In case of wires require unclasping or loosening to move the location to perform adjustment or part replacement, be sure to rearrange them neatly to restore properly in the same location as they were originally placed, or causing to produce a noise may occasionally occur.

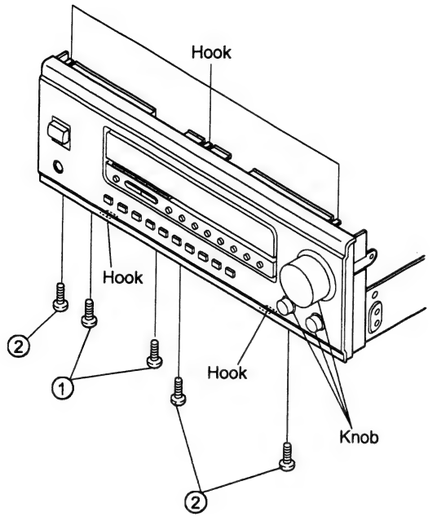


# DISASSEMBLY

(To reassemble reverse disassembly)

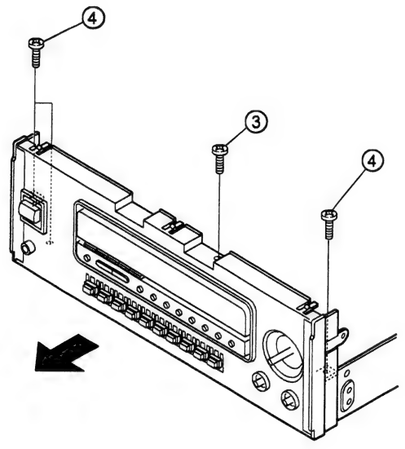
## 1. Front Aluminium Panel

1) Pull out 3 Knobs.
2) Remove 5 screws ① and ②.
3) Unfasten 3 upper hooks and 2 below hooks.



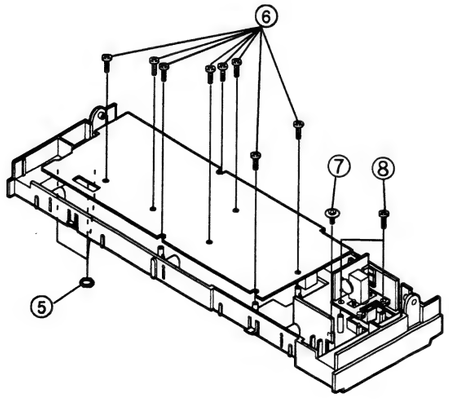

## 2. Front Mold Panel

1) Remove 4 screws ③, ④.
2) Detach the Front Mold Panel in the arrow direction as it connects with connectors.



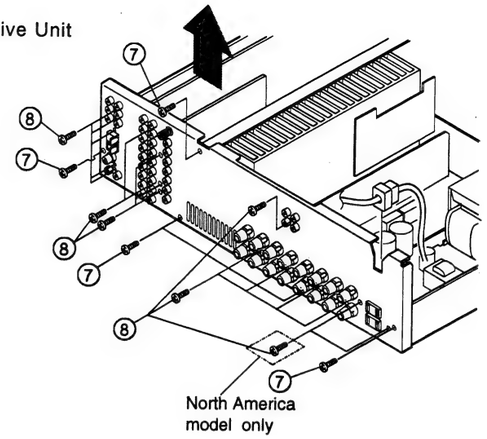

● **Disassembling P.W.Board**

3) Remove 3 nuts ⑤ and 11 screws ⑥, ⑦, ⑧.




## 3. Tuner, Audio In and C-Video Unit

1) Remove 23 screws ⑦, ⑧.
2) Disconnect the connector, pulling the objective Unit in the arrow direction.

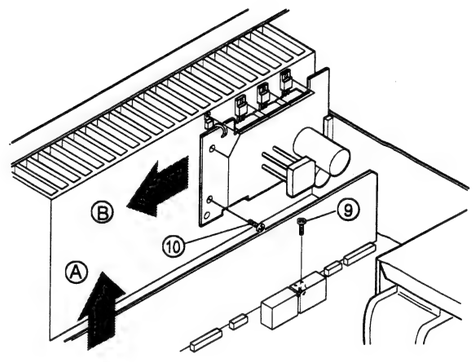



## 4. Amp Unit

1) Remove 1 screw ⑨.
2) Disconnect from the connector,pulling in the arrow direction Ⓐ.

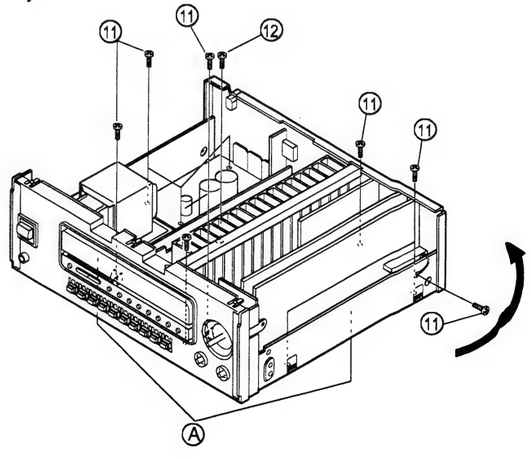
## 5. Regulator Unit

1) Remove 6 screws ⑩.
2) Disconnect from the connector,pulling in the arrow direction Ⓑ.

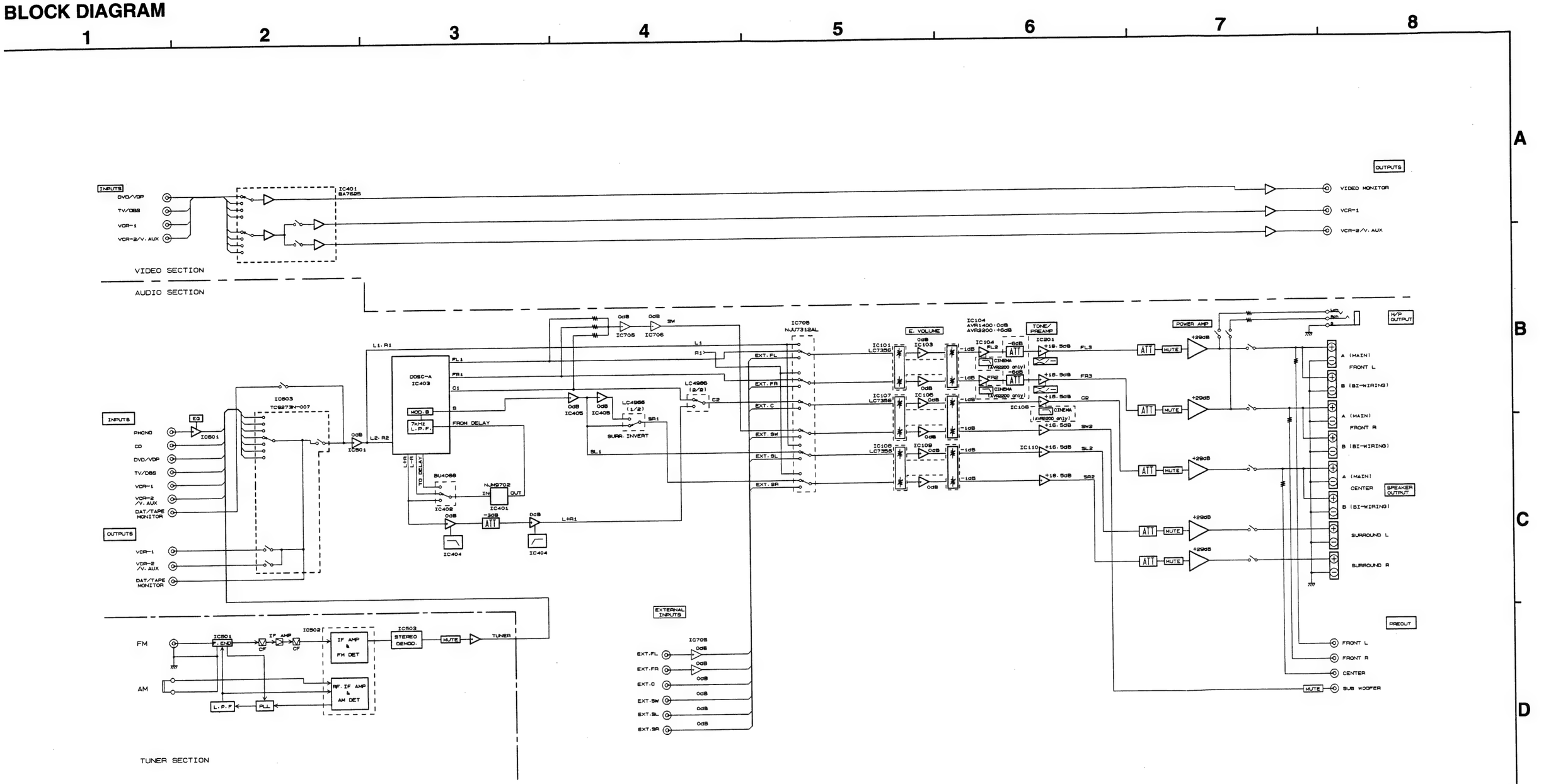



## 6. When Maintenance for Control Unit (1U-3065-1) and Power Unit (1U-3066-1)

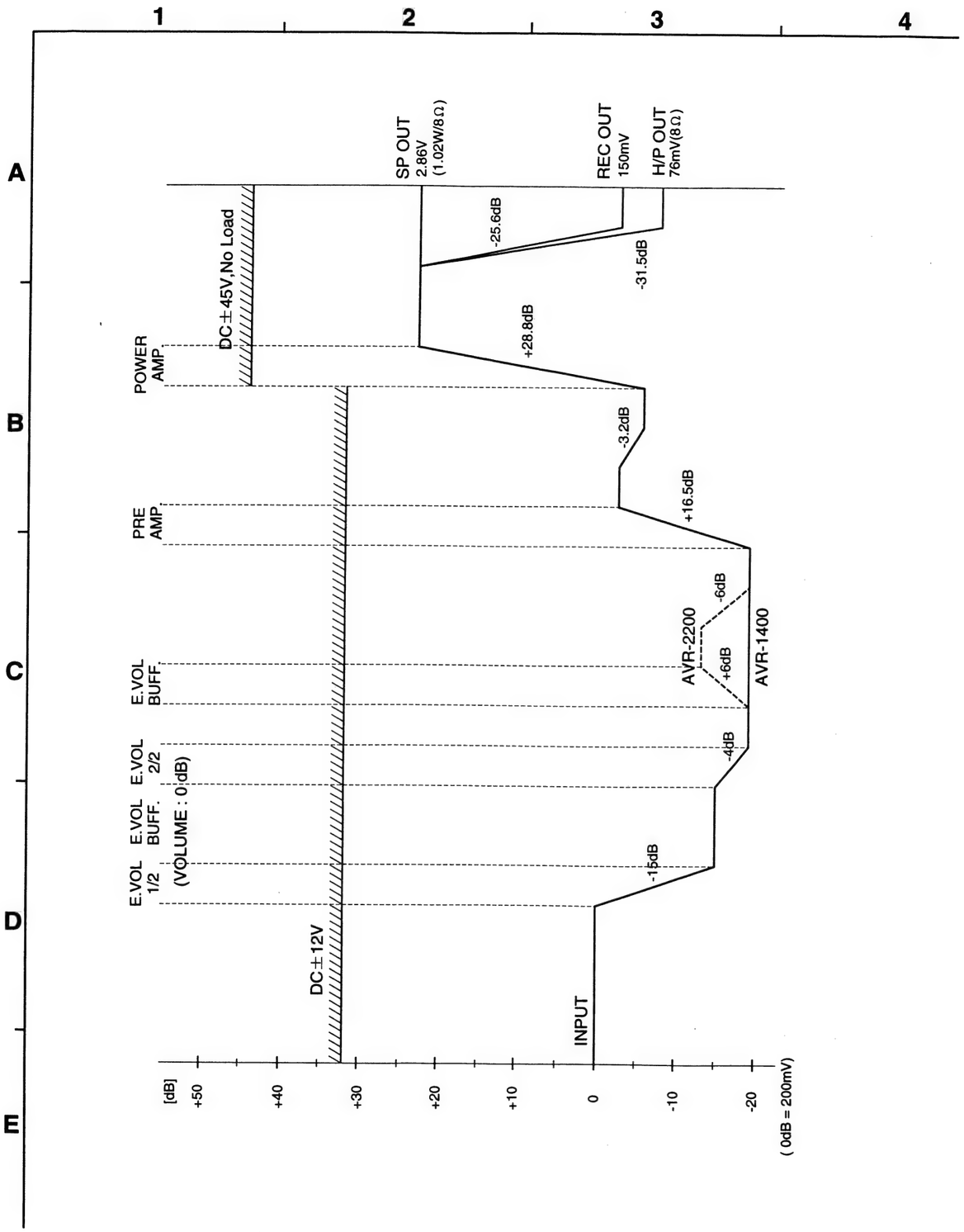
1) Unfasten the Front Alminium Panel.
2) Remove 14 screws ⑪, ⑫.
3) Unfasten the hooks of Holder Ⓐ.
4) Then separate Chassis only, and by standing it in the arrow direction, it is possible to check with power on.



# BLOCK DIAGRAM



## BLOCK LEVELDIAGRAM

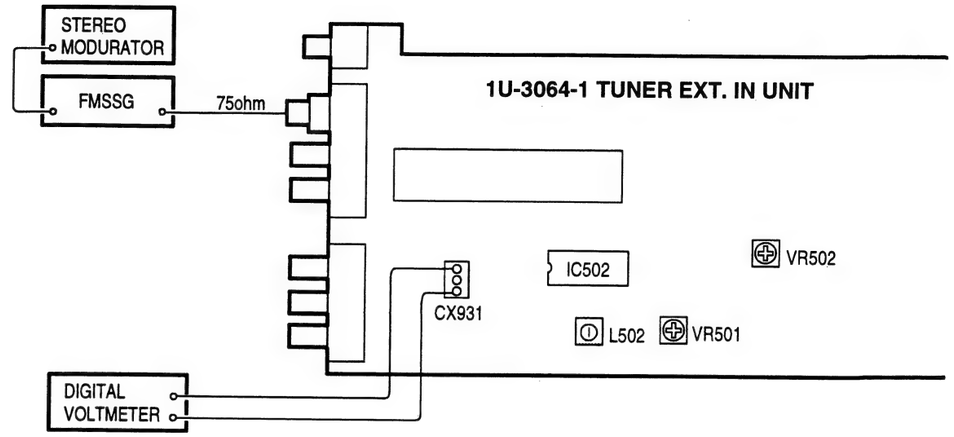



## ADJUSTMENT

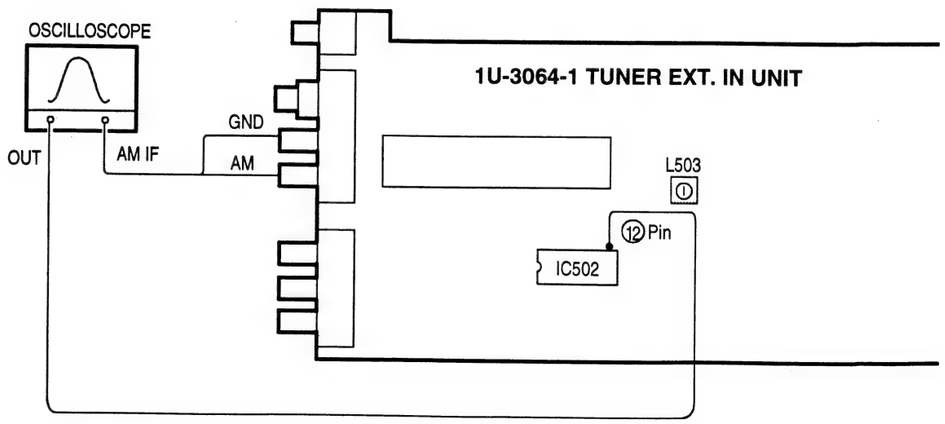
### Tuner Section

**CONNECTION DIAGRAM OF MEASURING INSTRUMENTS**

● **FM**




● **AM**



## FM/MPX ALIGNMENT

| Step | Alignment Item | Tuning Frequency Setting | Input | | | | | Output | | Adjust | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Type | Frequency | Input Level | Modulation | Coupling | Type | Connect to | Points | Adjust to | |
| 1 | Tuning Center | 98.1 MHz | FM SSG | 98.1 MHz | 60 dBμ | None | Antenna Terminal | Digital Voltmeter | CX931 | L502 | ± 50mV | Function : FM Mode : Auto |
| 2 | Separation | 98.1 MHz | FM SSG | 98.1 MHz | 60 dBμ | Stereo (L) 1KHz 100% | Antenna Terminal | AC Voltmeter | AUDIO OUT Terminal (R) | VR502 | Maximum Separation | — |
| 3 | Signal Level | 98.1 MHz | FM SSG | 98.1 MHz | 20 dBμ | Off | Antenna Terminal | — | — | VR501 | Light "TUNED" FLD Character | — |

## AM ALIGNMENT

| Step | Alignment Item | Frequency | Input | Output | | Adjustment | | Remarks |
|---|---|---|---|---|---|---|---|---|
| | | | | Type | Connect to | Points | Adjust to | |
| 1 | IF | — | IF SWEEP<br>(Input level is not over to work A.G.C.) | Oscilloscope | IC502 12Pin | L503 | Maximum height and best symmetry curve | |

## Audio Section

### Idling Current (1U-3066-1)

Required measurement equipment : DC Voltmeter

### Arrengement

(1) Avoid direct blow from an air conditioner or an electric fan, and adjust the unit at normal room tempereture 15 °C ~ 30 °C (59 °F ~ 86 °F).

(2) Presetting

- POWER (Power sourse switch) → OFF
- VOLUME (Volume control) → "---" : fully counterclockwise ( ◯ min.)
- BASS, TREBLE (Tone control) → FLAT: (Controls to center)
- SPEAKER-A (Speaker terminal) → No load (Do not connect speaker, dummy resistor, etc.)

### Adjustment

(1) Remove top cover and set VR501, VR502, VR503, VR504, VR505, on 1U-3066-1 (Power Unit) at counterclockwise ( ◯ ) fully.

(2) Connect DC Voltmeter to test points (FRONT-Lch: TP501, FRONT-Rch: TP502, CENTER ch: TP503, SURROUND-Lch: TP504, SURROUND-Rch: TP505).

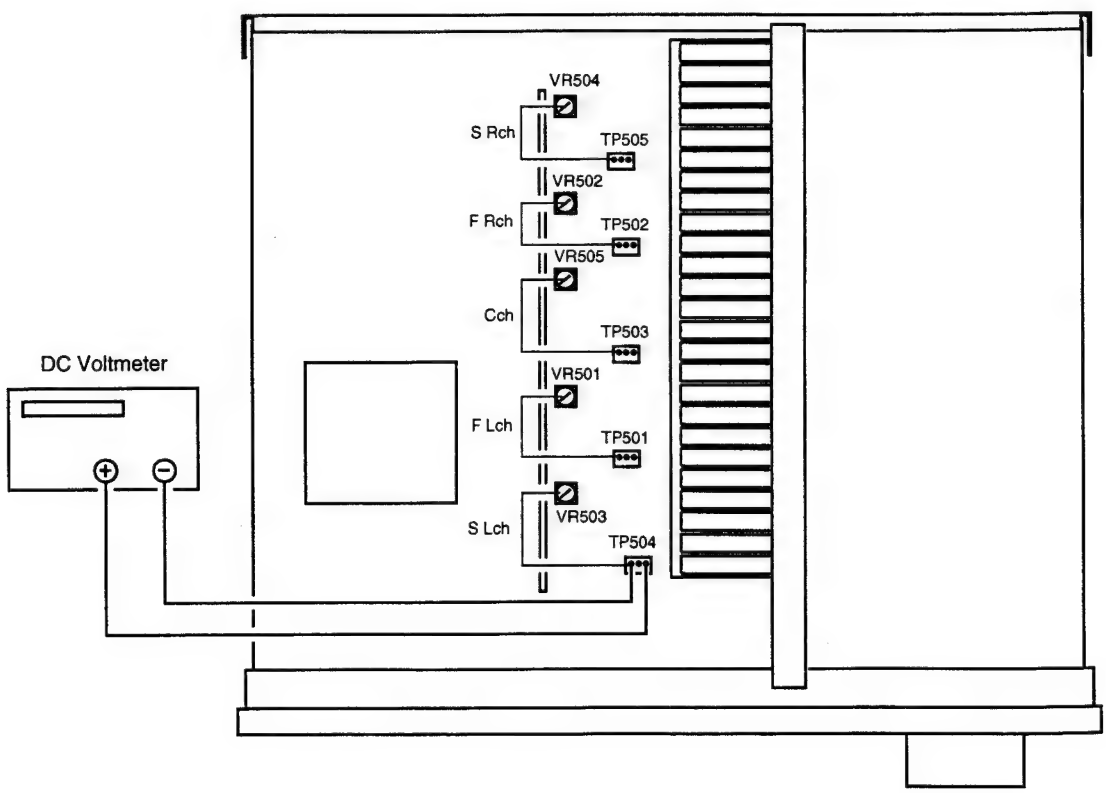
(3) Connect power cord to AC Line, and turn power switch "ON".

(4) Presetting. MODE : 5CH STEREO
FUNCTION : CD

(5) Allow 2 minutes, and turn VR501 clockwise ( ◯ ) and adjust the TEST POINTS voltage to 1.5 mV ±0.5 mV DC.

(6) After 10 minutes from preset, turn VR501 to set the voltage to 3 mV ±0.5 mV DC.

(7) Adjust the Variable Resistors of other channels in the same way.



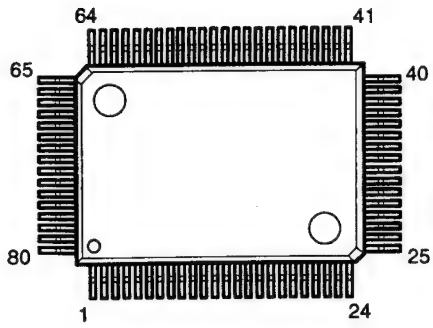
# SEMICONDUCTORS

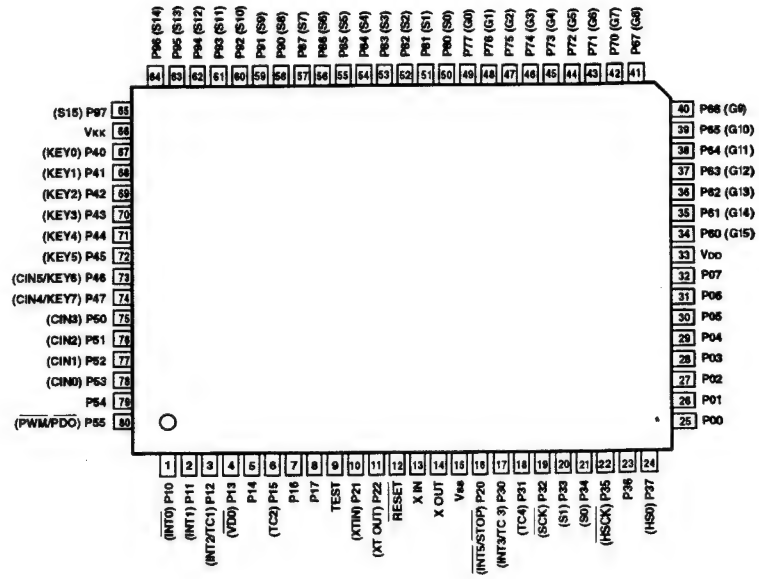
## ● IC's

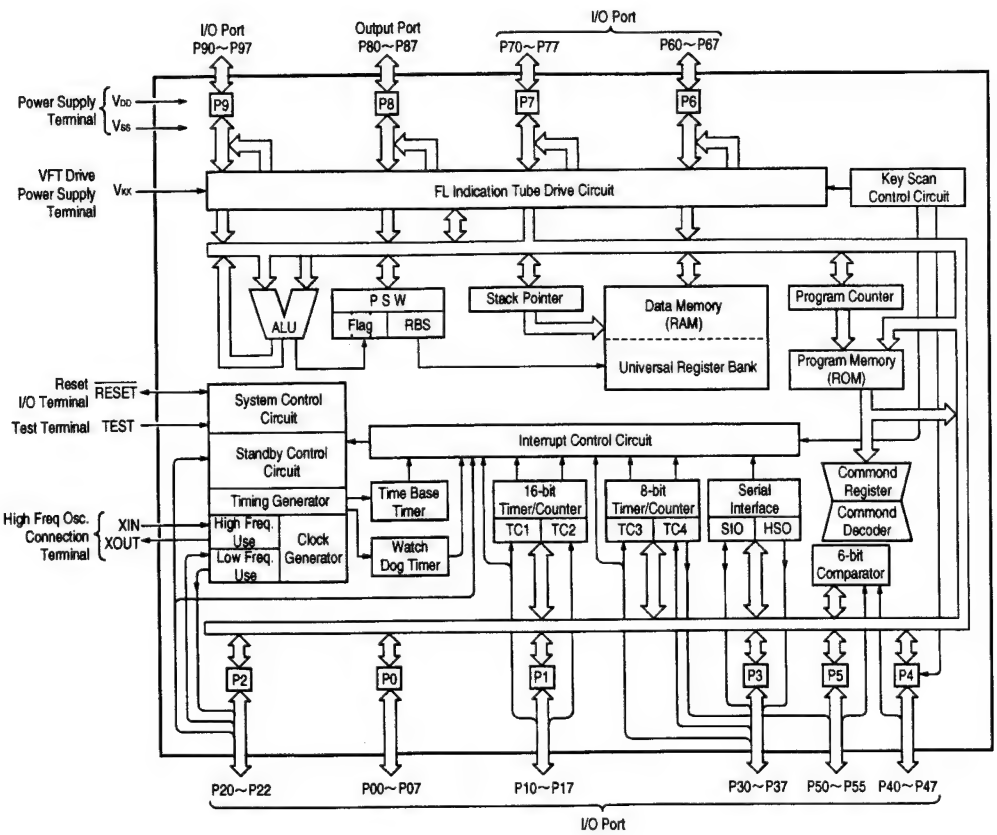
**Note:** Indications before IC numbers denote P.W.B. name.

**AU** : Audio in, Display Unit
**TU** : Tuner, Volume, Video Unit
**CO** : Control, Power Unit
**PA** : Power Amp Unit

### TMP87CS71F-6631 (CO: IC113)



## TMP87CS71F-6631 (IC113) Terminal Function

| Pin No. | Port Name | Symbol | I/O | Type | Op | Det | Res | Init | Function |
|---|---|---|---|---|---|---|---|---|---|
| 1 | P10/INT 0 | PROTECTION IN | I | — | Eu | E&L | Z | — | Protection detecting input. (L: Detected) |
| 2 | P11/INT 1 | EFFECT | O | C | — | — | Z | L | Surround signal select output. |
| 3 | P12/INT 2 | RDS START | I | — | Eu | Ed | Z | — | RDS data input (LC7074). *E2 model only. |
| 4 | P13/DVO | STEREO/MONO | O | C | — | — | Z | L | STEREO/MONO control signal. (L: STEREO receiving) |
| 5 | P14 | PLL-ST | O | C | — | — | Z | L | LM7001 control output. |
| 6 | P15/TC2 | PLL-CLK | O | C | — | S | Z | L | LM7001 control output. |
| 7 | P16 | PLL-DATA | O | C | — | S | Z | L | LM7001 control output. |
| 8 | P17 | TUNER MUTE | O | C | — | — | Z | H | Tuner mute output. (H: Mute) |
| 9 | TEST | TEST | I | — | GND | S | — | — | Connect to ground. |
| 10 | P21/XTIN | STEREO SIGNAL | I | — | Eu | Lv | Z | — | STEREO control signal. (L: STEREO receiving) |
| 11 | P22/XTO | TUNED SIGNAL | I | — | Eu | Lv | Z | — | Tuning detection. (L: Tuning) |
| 12 | RESET | RESET | I | — | Eu | Lv | L | — | Reset input. |
| 13 | XIN | XIN | I | — | — | — | — | — | Oscillator circuit terminal. (4MHz) |
| 14 | XOUT | XOUT | O | — | — | — | — | — | Oscillator circuit terminal. (4MHz) |
| 15 | VSS | GND | I | — | GND | — | — | — | Ground. |
| 16 | P20/INT 5 | POWER OFF | I | — | Eu | Lv | Z | — | Power OFF detection terminal. (L: Power OFF) |
| 17 | P30/INT 3 | REMOCON | I | — | Ed | E&L | Z | — | Remote signal input. |
| 18 | P31/TC4 | RDS RST | O | N | — | — | Z | L | RDS reset output (LC7074). *E2 model only. |
| 19 | P32/SCK | RDS CLK | I | — | — | S | Z | — | RDS clock input (LC7074). |
| 20 | P33/SI | RDS DATA | I | — | — | S | Z | — | RDS data input (LC7074). |
| 21 | P34/SO | OSD RST | O | N | Eu | — | Z | H | OSD control output. (M35015), AVR1400/2200: Lout fixed |
| 22 | P35/HSCK | OSD CLK | O | N | Eu | S | Z | H | OSD control output. (M35015), AVR1400/2200: Lout fixed |
| 23 | P36 | OSD CS | O | N | Eu | — | Z | H | OSD control output. (M35015), AVR1400/2200: Lout fixed |
| 24 | P37/HSO | OSD DATA | O | N | Eu | S | Z | L | OSD control output. (M35015), AVR1400/2200: Lout fixed |
| 25 | P00 | POWER | O | C | — | — | Z | H | Power supply relay control output. (H: ON) |
| 26 | P01 | FL RST | O | C | — | — | Z | L | Fluorescent display control output. (MSC1937) |
| 27 | P02 | FL DATA | O | C | — | — | Z | L | Fluorescent display control output. (MSC1937) |
| 28 | P03 | FL CLK | O | C | — | — | Z | L | Fluorescent display control output. (MSC1937) |
| 29 | P04 | DD REQ | O | C | — | — | Z | L | Digital delay control output. (NJU9702G) |
| 30 | P05 | DD DATA | O | C | — | — | Z | L | Digital delay control output. (NJU9702G) |
| 31 | P06 | DD CLK | O | C | — | — | Z | L | Digital delay control output. (NJU9702G) |
| 32 | P07 | SURR.LPF | O | C | — | — | Z | L | Surround signal frequency response select output. (H: LPF ON) |
| 33 | VDD | VDD | I | — | — | — | — | — | Connect to +5V power supply. |
| 34 | P60 | A | O | P | Id | — | Z | H | Video input control output. (BA7625, BA7626) (L: Select) |
| 35 | P61 | B | O | P | Id | — | Z | H | Video input control output. (BA7625, BA7626) (L: Select) |
| 36 | P62 | E. VOL CE2 | O | P | Id | — | L | L | Erectronic volume control output. (LC7536) (Center/Sub woofer, Rear L/R) |
| 37 | P63 | E. VOL CE1 | O | P | Id | — | L | L | Erectronic volume control output. (LC7536) (Front L/R) |
| 38 | P64 | E. VOL DATA | O | P | Id | — | L | H | Electronic volume control output. (LC7536) |
| 39 | P65 | E. VOL CK | O | P | Id | — | L | H | Electronic volume control output. (LC7536) |
| 40 | P66 | SURR INVERT | O | P | Id | — | L | L | Surround signal invert control output. |
| 41 | P67 | CINEMA | O | P | Id | — | L | L | Cinema Equalizer control output. (H: ON) |
| 42 | P70 | PRO. CNT-E | O | P | Id | — | L | H | Test tone control output. |
| 43 | P71 | PRO. CNT-A | O | P | Id | — | L | L | Test tone control output. |
| 44 | P72 | PRO. CNT-B | O | P | Id | — | L | L | Test tone control output. |
| 45 | P73 | PRO. NORMAL | O | P | Id | — | L | L | Center mode control output. |
| 46 | P74 | PRO. WIDE | O | P | Id | — | L | H | Center mode control output. |
| 47 | P75 | VOL. MUTE | O | P | Id | — | L | L | Control signal at minus infinite of master volume. (L: infinite) |
| 48 | P76 | SUR | O | P | Id | — | L | H | Surround signal select control output. |
| 49 | P77 | L+R | O | P | Id | — | L | H | Surround signal select control output. |
| 50 | P80 | L-R | O | P | Id | — | L | H | Surround signal select control output. |
| 51 | P81 | STANDBY LED | O | P | Id | — | L | H | Standby indication LED drive output. (H: Lighting) |
| 52 | P82 | PRO LOGIC LED | O | P | Id | — | L | H | Pro Logic indication LED drive output. (H: Lighting) |
| 53 | P83 | H/P MUTE | O | P | Id | — | L | H | Headphone and pre-output relay control output. (L: Mute) |
| 54 | P84 | SP-CENTER | O | P | Id | — | L | L | Center speaker relay control output . (L: Mute) |
| 55 | P85 | SP-REAR | O | P | Id | — | L | L | Rear speaker relay control output. (L: Mute) |

| Pin No. | Port Name | Symbol | I/O | Type | Op | Det | Res | Ini | Function |
|---|---|---|---|---|---|---|---|---|---|
| 56 | P86 | SP-A | O | P | Id | — | L | H | Front speaker relay control output. (L: Mute) |
| 57 | P87 | SUB WOOFER MUTE | O | P | Id | — | L | H | Sub woofer mute output. (L: Mute) |
| 58 | P90 | C | O | P | Id | — | Z | H | Video input control output. (BA7625, BA7626) (L: Select) |
| 59 | P91 | D | O | P | Id | — | Z | H | Video input control output. (BA7625, BA7626) (L: Select) |
| 60 | P92 | E | O | P | Id | — | Z | H | Video input/output control output. (BA7625, BA7626)(L:Select) |
| 61 | P93 | S2 | O | P | Id | — | L | — | Video signal select control output, AVR1400/2200: Lout Fixed |
| 62 | P94 | S1 | O | P | Id | — | L | — | Video signal select control output, AVR1400/2200: Lout Fixed |
| 63 | P95 | FUNC CLK | O | P | Id | S | L | L | Function control output. (TC9273–007,–004, NJU7312AL) |
| 64 | P96 | FUNC DATA | O | P | Id | S | L | L | Function control output. (TC9273–007,–004, NJU7312AL) |
| 65 | P97 | FUNC ST1 | O | P | Id | — | L | L | Function control output. (TC9273–007,–004) |
| 66 | VKK | VKK | I | — | — | — | — | — | Connect to ground. |
| 67 | P40/KEY0 | FUNC ST2 | O | N | Eu | — | Z | L | Function control output. (NJU7312AL) |
| 68 | P41/KEY1 | S-MONITOR DET. | I | — | Eu | Lv | Z | — | Judgement whether S monitor is connected or not (L: Connecting input),AVR1400: Lout fixed |
| 69 | P42/KEY2 | S-SIGNAL DET. | I | — | Eu | Lv | Z | — | S signal input control. (H: S signal input),AVR1400: Lout fixed |
| 70 | P43/KEY3 | OSD SYNC DET. | I | — | Eu | Lv | Z | — | OSD sync switching signal. (H: External sync),AVR1400/2200: Lout fixed |
| 71 | P44/KEY4 | VSEL A | I | — | Eu | — | Z | — | Master volume setting signal. (Rotary encode) |
| 72 | P45/KEY5 | VSEL B | I | — | Eu | — | Z | — | Master volume setting signal. (Rotary encode) |
| 73 | P46/CIN5 | MODE | I | — | Eu | Lv | Z | — | Version select. |
| 74 | P47/CIN4 | KEY5 | I | — | Eu | Lv | Z | — | Key input 5. |
| 75 | P50/CIN3 | KEY4 | I | — | Eu | Lv | Z | — | Key input 4. |
| 76 | P51/CIN2 | KEY3 | I | — | Eu | Lv | Z | — | Key input 3. |
| 77 | P52/CIN1 | KEY2 | I | — | Eu | Lv | Z | — | Key input 2. |
| 78 | P53/CIN0 | KEY1 | I | — | Eu | Lv | Z | — | Key input 1. |
| 79 | P54 | TAPE MONITOR | O | N | Eu | — | Z | H | Tape Monitor control output. (H: Tape Monitor On) |
| 80 | P55/PMW | MODE.M | I | — | Eu | — | Z | — | Version select. |

**NOTE:**

Pin No. : Terminal number of microcomputer.

Port Name : The name entered in the data sheet of microcomputer.

Symbol : Symbolized interface function.

I/O : Input or out of part.

"I" = Input port

"O" = Output port

Type : Composition of port in case of output port.

"C" = CMOS output

"N" = NMOS open drain output

"P" = PMOS open drain output

Op : Pull up/Pull down selection information.

"Iu" = Inner microcomputer pull up

"Id" = Inner microcomputer pull down

"Eu"= External microcomputer pull up

"Ed"= External microcomputer pull down

Det : Indicates judging state of input port. Level detection is "LV"; Edge detection is "Ed"; Detection by both shifting is "E&L"; Serial data detection is "S" (Serial data output is also "S").

Res : State at reset.

"H" = Outputs High Level at reset

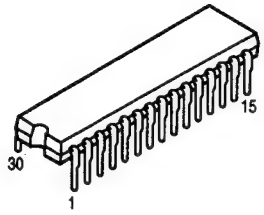
"L" = Outputs Low Level at reset

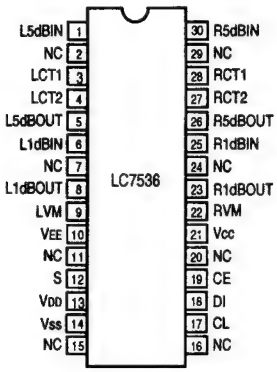
"Z" = Becomes High impedance mode at reset

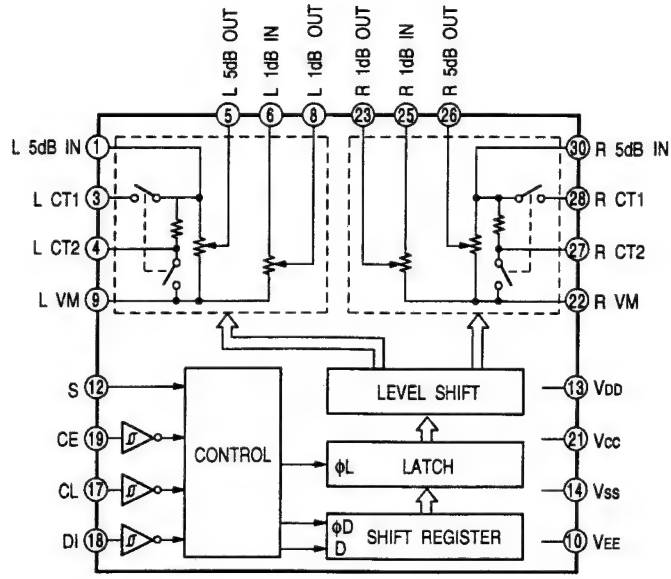
Ini : Initial output state.

Function : Function and logical level explanation of signals to be interface.

## LC7536
## (TU: IC101, 107, 108)



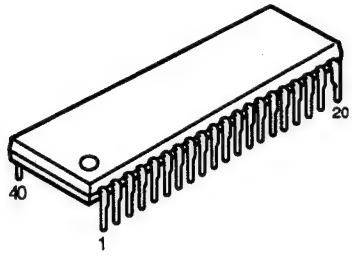



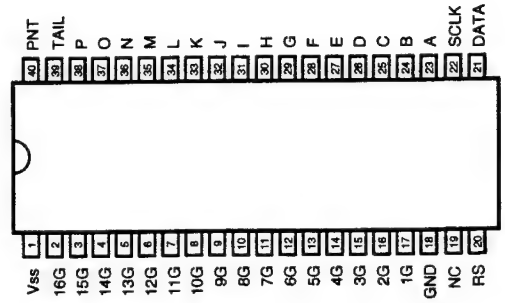




### LC7536 Terminal Function

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 1 | L 5dB IN | I | Input terminal for 5dB step attenuator, it should be driven with low impedance path. |
| 2 | NC | – | No connection. |
| 3 | L CT1 | I | For loudness control, connect a capacitor between CT1 and 5dB IN with high frequency compensation, and also connect a capacitor between CT2 and Vm with low frequency compensation. |
| 4 | L CT2 | | |
| 5 | L 5dBOUT | O | Output terminal for 5dB step attenuator with approx. 1Mohm load impedance. |
| 6 | L 1dBIN | I | Input terminal for 1dB step attenuator, it should be driven with low impedance. |
| 7 | NC | – | No connection. |
| 8 | L 1dBOUT | O | Output terminal for 1dB step attenuator with approx. 47kohm ~ 1Mohm load impedance. |
| 9 | L VM | | Common terminal for volume control. |
| 10 | VEE | I | Connect to power supply. |
| 11 | NC | – | No connection. |
| 12 | S | | Selection terminal for address code during data format. |
| 13 | VDD | I | Connect to power supply (Pay attention to the rising time so that Vcc does rise up faster than VDD when the power turns). |
| 14 | Vss | I | Connect to power supply. |
| 15 | NC | – | No connection. |
| 16 | NC | – | No connection. |
| 17 | CL | I | Input terminal for controlling LC7536 serial data with 0 ~ 5V amplitude. |
| 18 | DI | | |
| 19 | CE | | |
| 20 | NC | – | No connection. |
| 21 | Vcc | I | Connect power supply (Pay attention to the rising time so that Vcc does not rise up faster than VDD when the power turns). |
| 22 | R VM | | Common terminal for volume control. |
| 23 | R 1dBOUT | O | Output terminal for 1dB step attenuator with approx. 47kohm ~ 1Mohm load impedance. |
| 24 | NC | – | No connection. |
| 25 | R 1dBIN | I | Input terminal for 1dB step attenuator, it should be driven with low impedance. |
| 26 | R 5dBOUT | O | Output terminal for 5dB step attenuator with approx. 1Mohm load impedance. |
| 27 | R CT2 | I | For loudness control, connect a capacitor between CT1 and 5dBIN with high frequency compensation, and also connect a capacitor between CT2 and Vm with low frequency compensation. |
| 28 | R CT1 | | |
| 29 | NC | – | No connection. |
| 30 | R SdBIN | I | Input terminal for 5dB step attenuator, it should be driven with low impedance path. |

**MSC1937-03RS**
**(AU: IC102)**

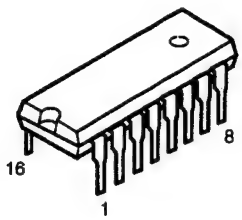


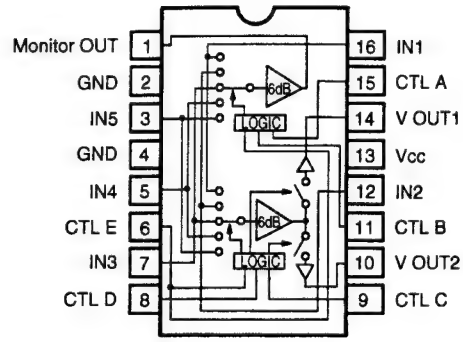




**MSC1937-03RS Terminal Function**

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 1 | Vss | – | Power supply (+5V). |
| 2 | 16G | O | Digit 16 output. |
| 3 | 15G | O | Digit 15 output. |
| 4 | 14G | O | Digit 14 output. |
| 5 | 13G | O | Digit 13 output. |
| 6 | 12G | O | Digit 12 output. |
| 7 | 11G | O | Digit 11 output. |
| 8 | 10G | O | Digit 10 output. |
| 9 | 9G | O | Digit 9 output. |
| 10 | 8G | O | Digit 8 output. |
| 11 | 7G | O | Digit 7 output. |
| 12 | 6G | O | Digit 6 output. |
| 13 | 5G | O | Digit 5 output. |
| 14 | 4G | O | Digit 4 output. |
| 15 | 3G | O | Digit 3 output. |
| 16 | 2G | O | Digit 2 output. |
| 17 | 1G | O | Digit 1 output. |
| 18 | GND | – | Ground. |
| 19 | NC | – | No connection. |
| 20 | RS | I | POWER-ON-RESET. (H: RESET) |
| 21 | DATA | I | Data input. |
| 22 | SCLK | I | Shift clock input. |
| 23 | A | O | Seg,ent A output. |
| 24 | B | O | Segment B output. |
| 25 | C | O | Segment C output. |
| 26 | D | O | Segment D output. |
| 27 | E | O | Segment E output. |
| 28 | F | O | Segment F output. |
| 29 | G | O | Segment G output. |
| 30 | H | O | Segment H output. |
| 31 | I | O | Segment I output. |
| 32 | J | O | Segment J output. |
| 33 | K | O | Segment K output. |
| 34 | L | O | Segment L output. |
| 35 | M | O | Segment M output. |
| 36 | N | O | Segment N output. |
| 37 | O | O | Segment O output. |
| 38 | P | O | Segment P output. |
| 39 | TAIL | – | No connection. |
| 40 | PNT | O | Point output. |

## BA7625 (TU: IC401)
## (BA7626)



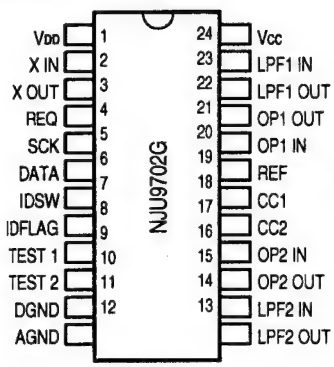

| A | B | E | MONITOR OUT |
|---|---|---|---|
| L | L | * | IN 1 |
| H | L | * | IN 2 |
| L | H | * | IN 3 |
| H | H | L | IN 4 |
| H | H | H | IN 5 |

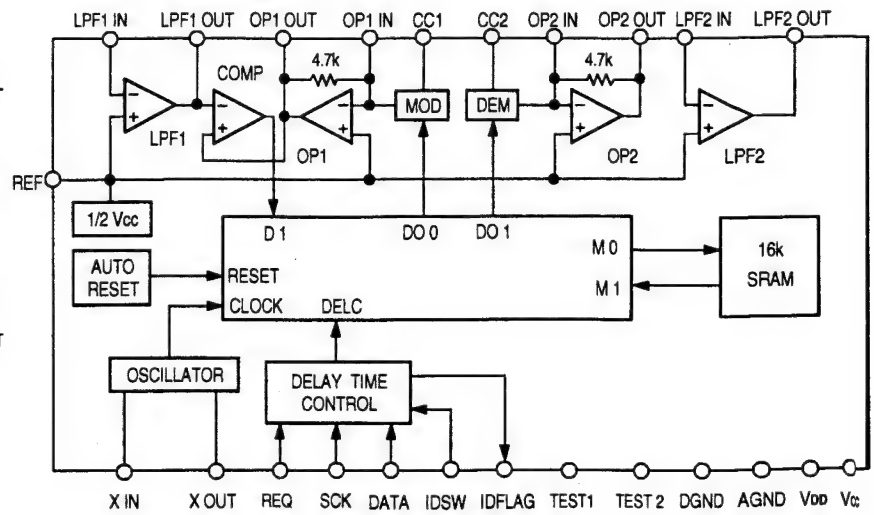
| C | D | E | V OUT 1 |
|---|---|---|---|
| L | L | * | — |
| H | L | * | IN 2 |
| L | H | * | IN 3 |
| H | H | L | IN 4 |
| H | H | H | IN 5 |

| C | D | E | V OUT 2 |
|---|---|---|---|
| L | L | * | IN 1 |
| H | L | * | — |
| L | H | * | IN 3 |
| H | H | L | IN 4 |
| H | H | H | IN 5 |

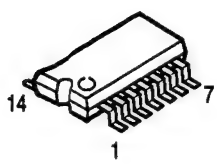
Note 1: * mark means that feasible for either H or L.
Note 2: Each input terminal is provided with sink chip clamp (BA7625).
Each input terminal takes 20kohm at the end (BA7626).

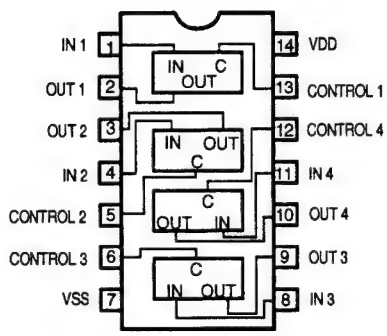
## NJU9702G
## (AU: IC401)



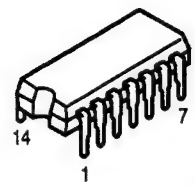



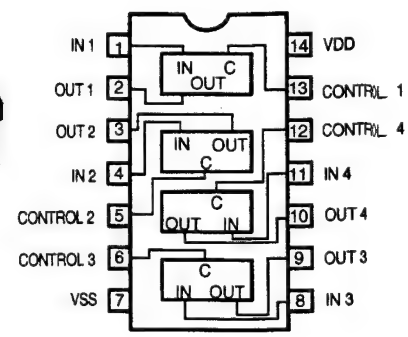

## BU4066BCF
## (AU: IC402)



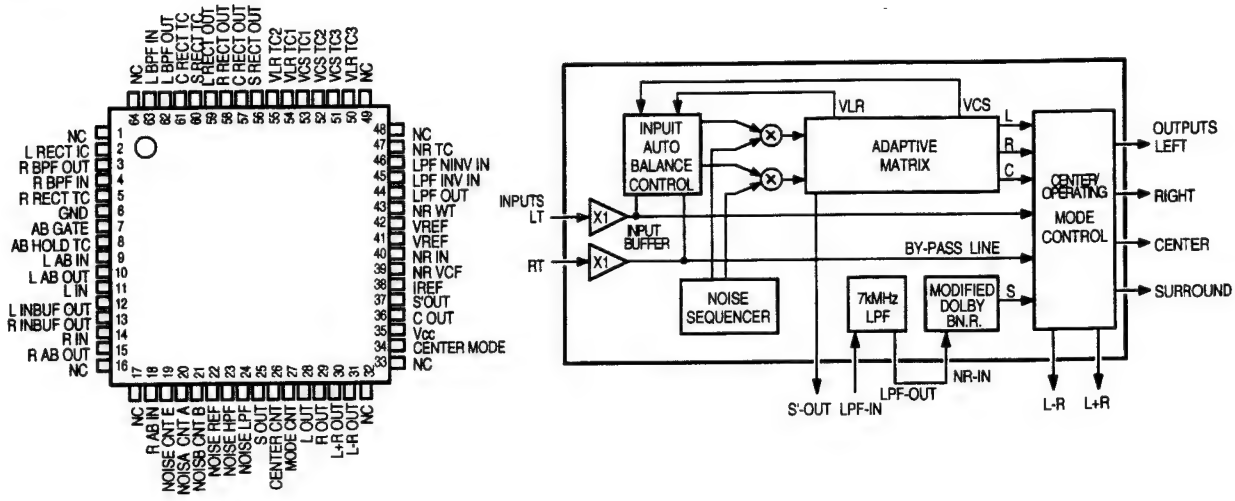




## LC4966
## (AU: IC704)

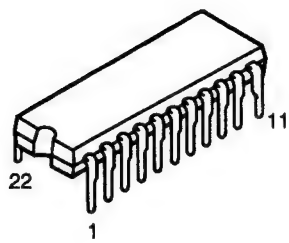


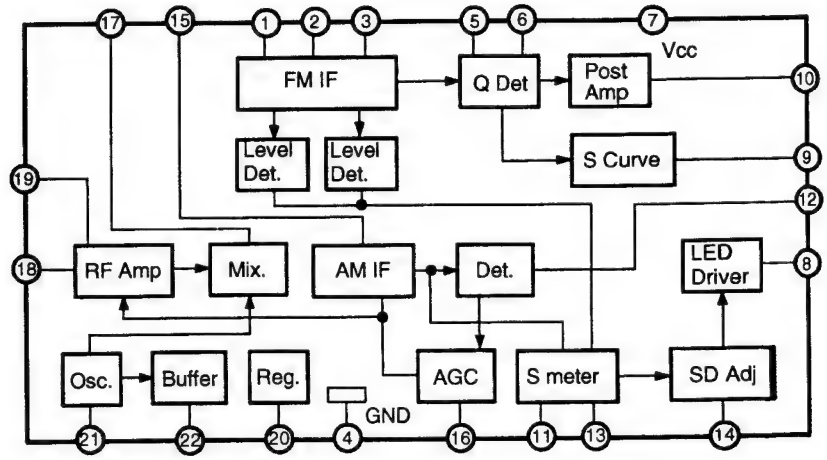



## DDSC-A
## (AU: IC403)

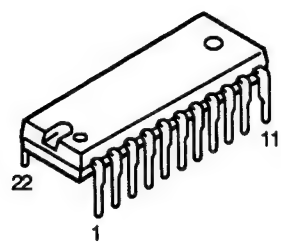


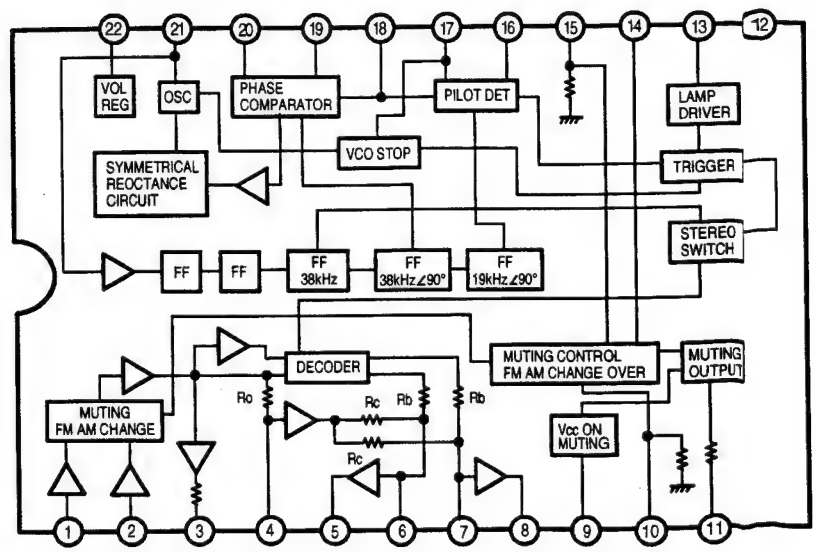

## LA1265 (S)
## (TU: IC502)



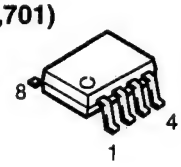



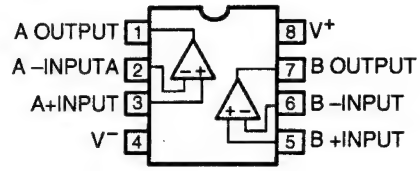

## LA3401
## (TU: IC503)



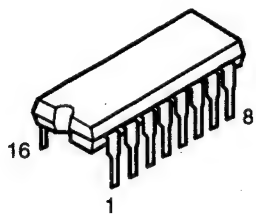



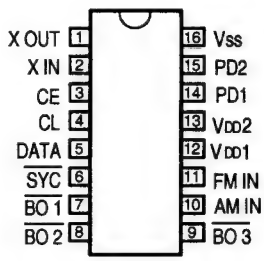
**BA15218F (AU: IC404, 405, 706)**
**(TU: IC105,106,109,110)**
**NJM2068MD(AU: IC201,501,601)**
**(TU: IC103, 104,701)**

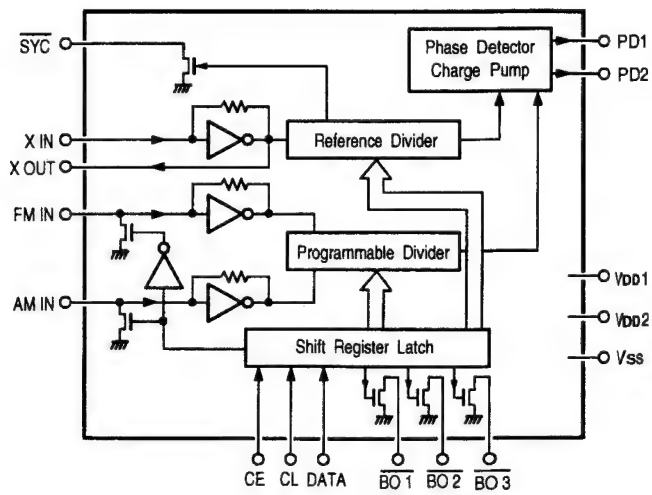


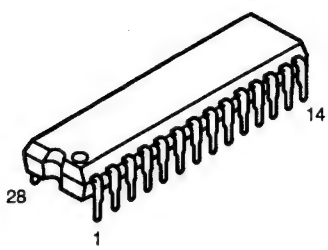

**LM7001 (TU: IC505)**

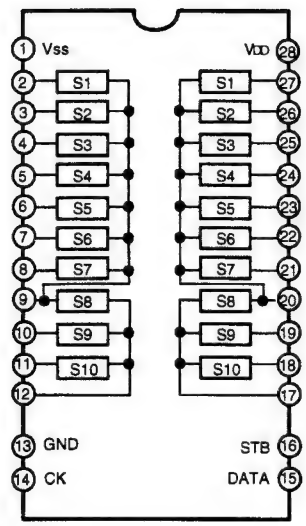



**TC9273N-007 (AU: IC603)**

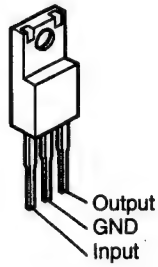


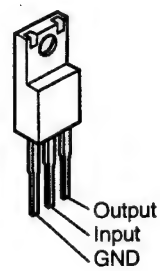

**TC9273N Terminal Function**

| Pin No. | Symbol | Name | Function | Note |
|---|---|---|---|---|
| 1 | Vss | –Power Terminal | Dual Power Use: VDD = 8.0~17 V, GND = 0V, Vss = –8.0~17V; Signal Power Use: VDD = 8.0~18V, Vss = GND = 0V | — |
| 13 | GND | Digital Ground | | |
| 28 | VDD | +Power Terminal | | |
| 2~12, 17~27 | S1~11 | I/O Terminal | Input terminal of analog switch. | — |
| 14 | CK | Clock Input | Clock input for data transfer. | Low level Border Input Terminal |
| 15 | DATA | Data Input | Serial input for switch setting. | |
| 16 | STB | Strobe Input | Strobe input for data writing.. | |

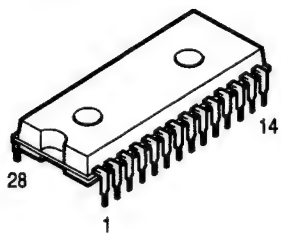
**NJM7806FA (S) (PA: IC502, 505)**
**NJM7812FA (S) (PA: IC503)**

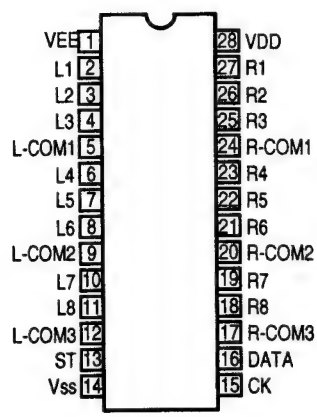


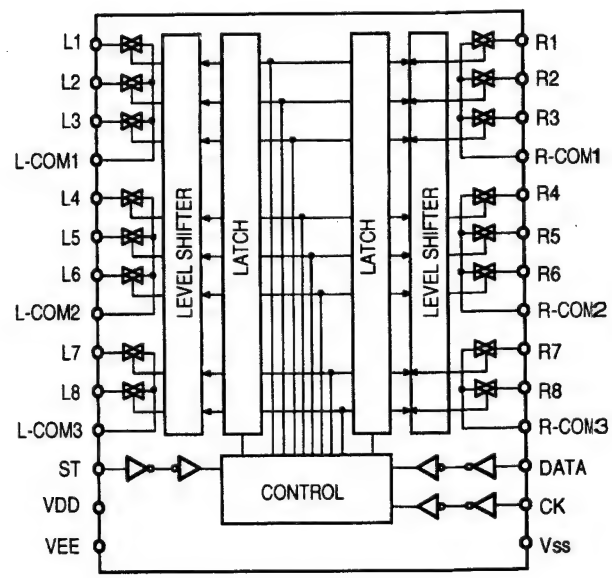

**NJM7912FA (PA: IC504)**




**NJU7312AL (TU: IC705)**

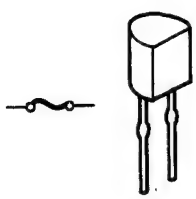


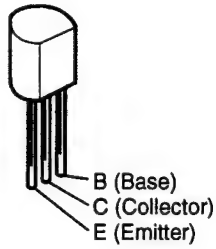

## ● IC PROTECTOR

**ICP-N15 (PA: IC501)**

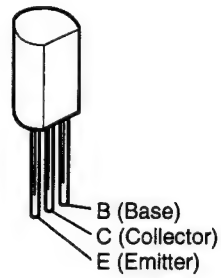


## ● TRANSISTORS

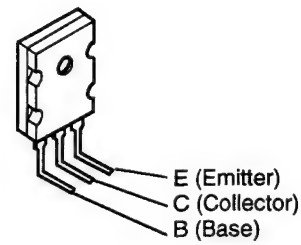
**2PA1015GR**
**2SA970 (BL)**
**2SA988 (E/F)**
**2SC1841 (E/F)**
**2SC2878 (A/B)**



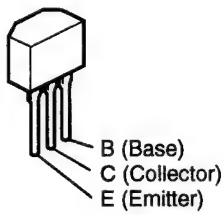

**2SC2705 (O)/(Y)**
**2SD1292 (R)**



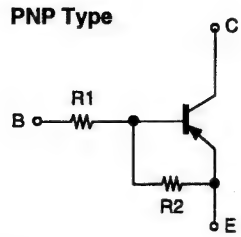

**2SA1491 (O/P/Y)**
**2SC3855 (O/P/Y)**




**DTA114ES**
**DTC114ES**

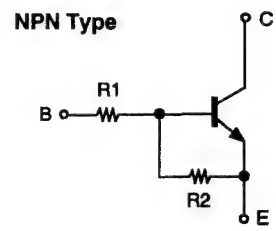



**DTA114ES**



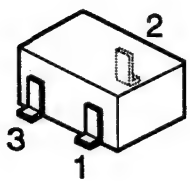

| | R1 | R2 |
|---|---|---|
| DTA114ES | 10kohm | 10kohm |

**DTC114ES**



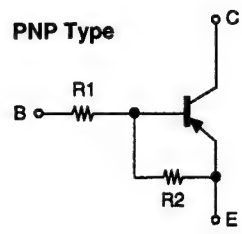

| | R1 | R2 |
|---|---|---|
| DTC114ES | 10kohm | 10kohm |

**DTA114TK**
**DTA114EK**
**DTA144EK**
**DTC114EK**
**DTC144EK**
**DTC323TK**
**RN2402**



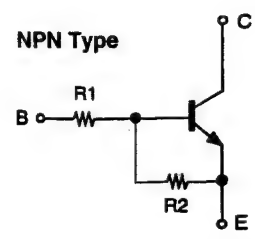

1: GND/Emitter
2: Out/Collector
3: In/Base

**DTA114TK**
**DTA114EK**
**DTA144EK**
**RN2402**



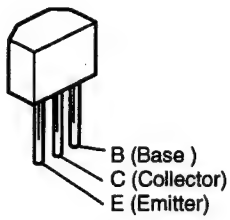

| | R1 | R2 |
|---|---|---|
| DTA114EK | 10kohm | - |
| DTA114EK | 10kohm | 10kohm |
| DTA144EK | 47kohm | 47kohm |
| RN2402 | 10kohm | 10kohm |

**DTC114EK**
**DTC144EK**
**DTC323TK**

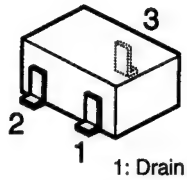



| | R1 | R2 |
|---|---|---|
| DTC114EK | 10kohm | 10kohm |
| DTC144EK | 47kohm | 47kohm |
| DTC323TK | 2.2kohm | - |

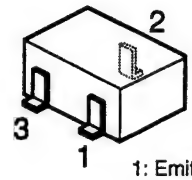
**2SA933S (S)**
**2SC3311A**
**2SC1740S (S)**



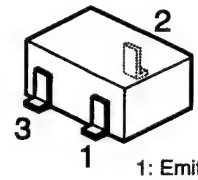

**2SK209 (GR)**



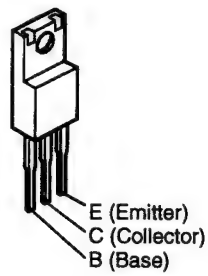

**2SD601A**



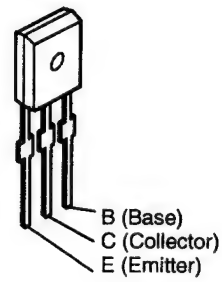

**2SC2712 (Y/GR)**
**2SC2996 (Y)**




**2SA1725 (O/P/Y)**
**2SC4495**

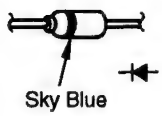



**2SB1328 (Q)**
**2SD2004 (Q)**

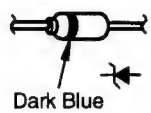



## ● DIODES (included LED)

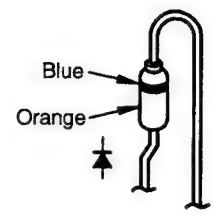
**1SS270A**



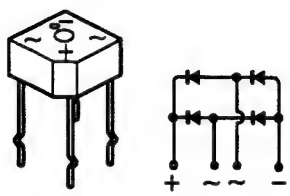

**MTZJ3.3A MTZJ7.5A**
**MTZJ5.6A MTZJ9.1A**
**MTZJ6.2A MTZJ36A**



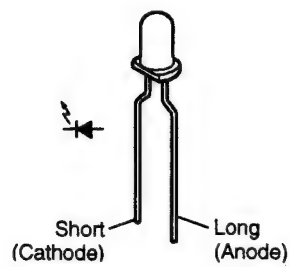

**1SR35-200A**




**S4VB20**
**(PA: D518,519,520)**

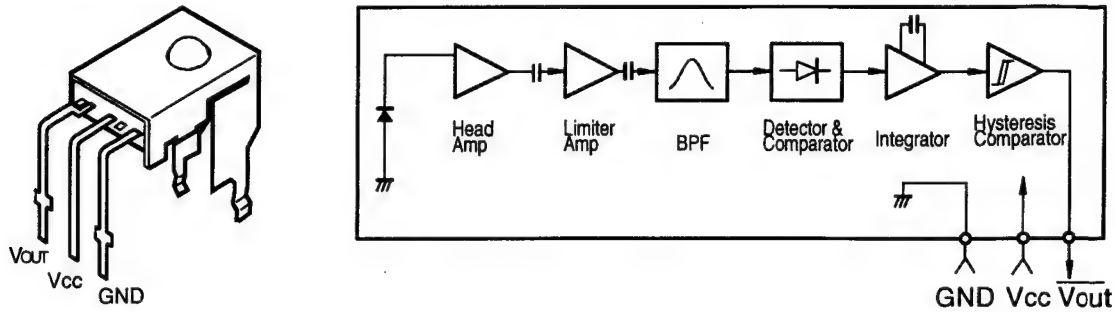



**SEL1210S (Red)**
**(AU: LD103)**
**SEL1410E (Green)**
**(AU: LD101,110,111)**

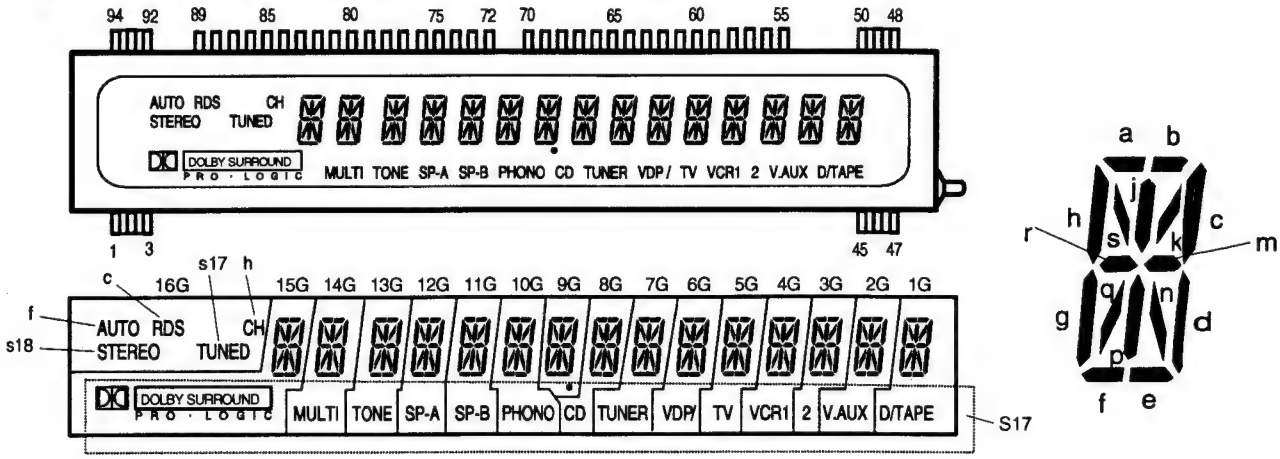


## ● OTHER

**GP1U271X (Remote Control Sensor)**
**(AU: IC101)**




## ● FL DISPLAY FIP16FM7R (Part No.: 3934156001)(AU: FL101)




(UPPER)

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TERMINAL No. | 94 | 93 | 92 | 91 | 90 | 89 | 88 | 87 | 86 | 85 | 84 | 83 | 82 | 81 | | | | | | |
| ELECTRODE | F1 | F1 | F1 | NP | NP | P a | P b | P c | P j | P k | P s | P h | P r | P m | | | | | | |
| TERMINAL No. | 80 | 79 | 78 | 77 | 76 | 75 | 74 | 73 | 72 | 71 | 70 | 69 | 68 | 67 | 66 | 65 | 64 | 63 | 62 | 61 |
| ELECTRODE | P d | P n | P q | P p | P g | P f | P e | P s17 | P s18 | NP | 16G | 15G | 14G | 13G | 12G | 11G | 10G | 9G | 8G | 7G |
| TERMINAL No. | | | | | | | | 60 | 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 | 50 | 49 | 48 |
| ELECTRODE | | | | | | | | 6G | 5G | 4G | 3G | 2G | 1G | NP | NP | NP | NP | F2 | F2 | F2 |

(LOWER)

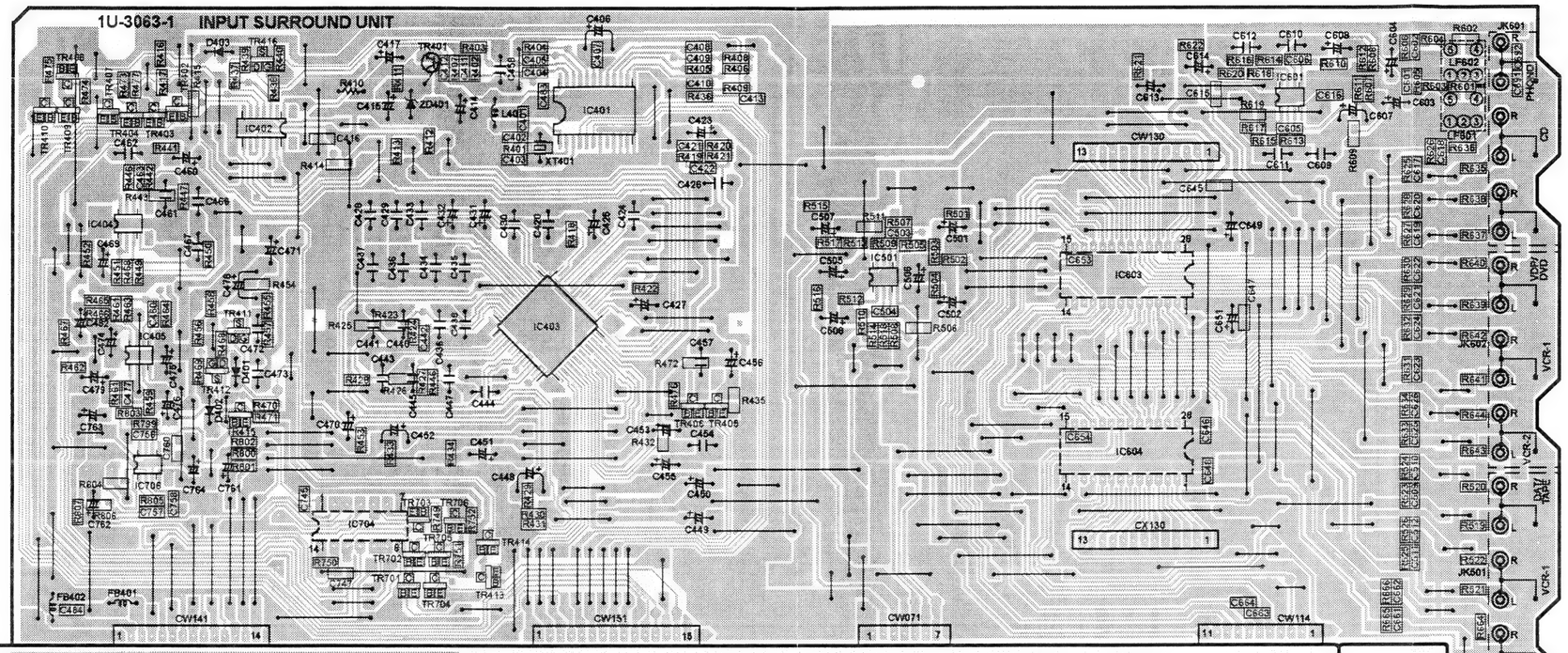
| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TERMINAL No. | | | | | | | | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 |
| ELECTRODE | | | | | | | | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP | F2 | F2 | F2 |
| TERMINAL No. | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 |
| ELECTRODE | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP |
| TERMINAL No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | | | | | | |
| ELECTRODE | F1 | F1 | F1 | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP | | | | | | |

Notes: F: Filament G: Grid A: Anode NP: No Pin

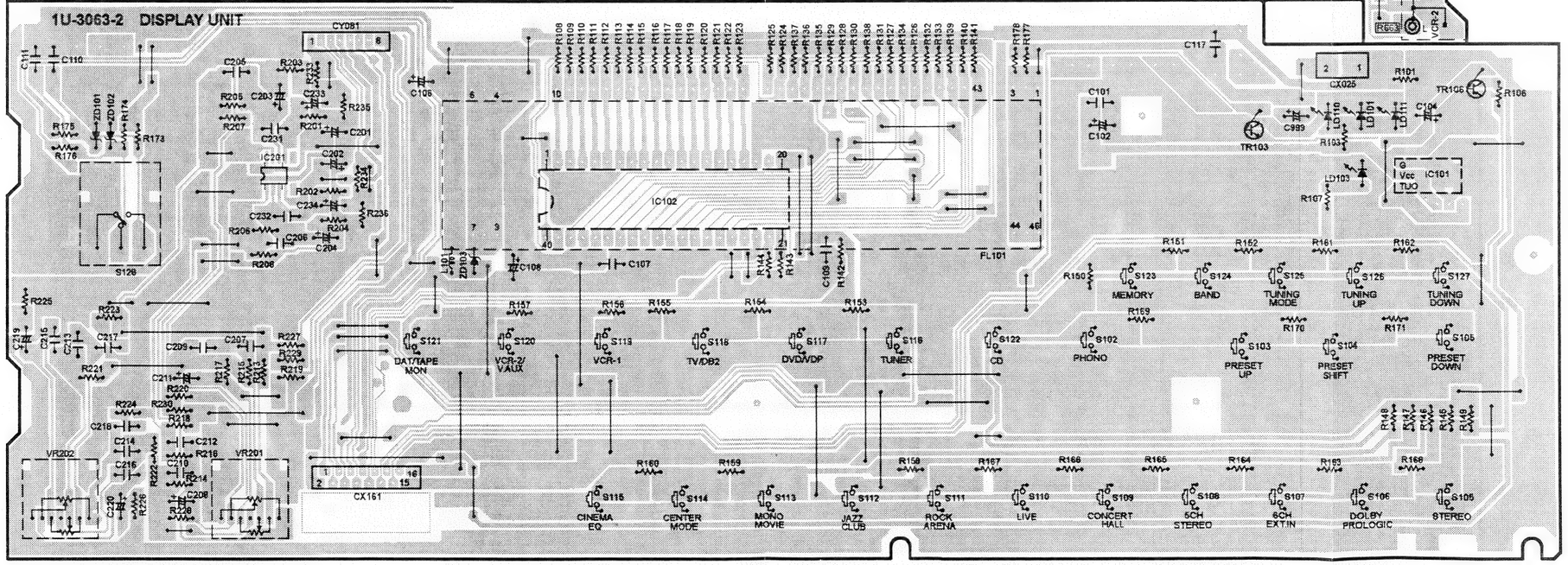
## PRINTED WIRING BOARD

1U-3063

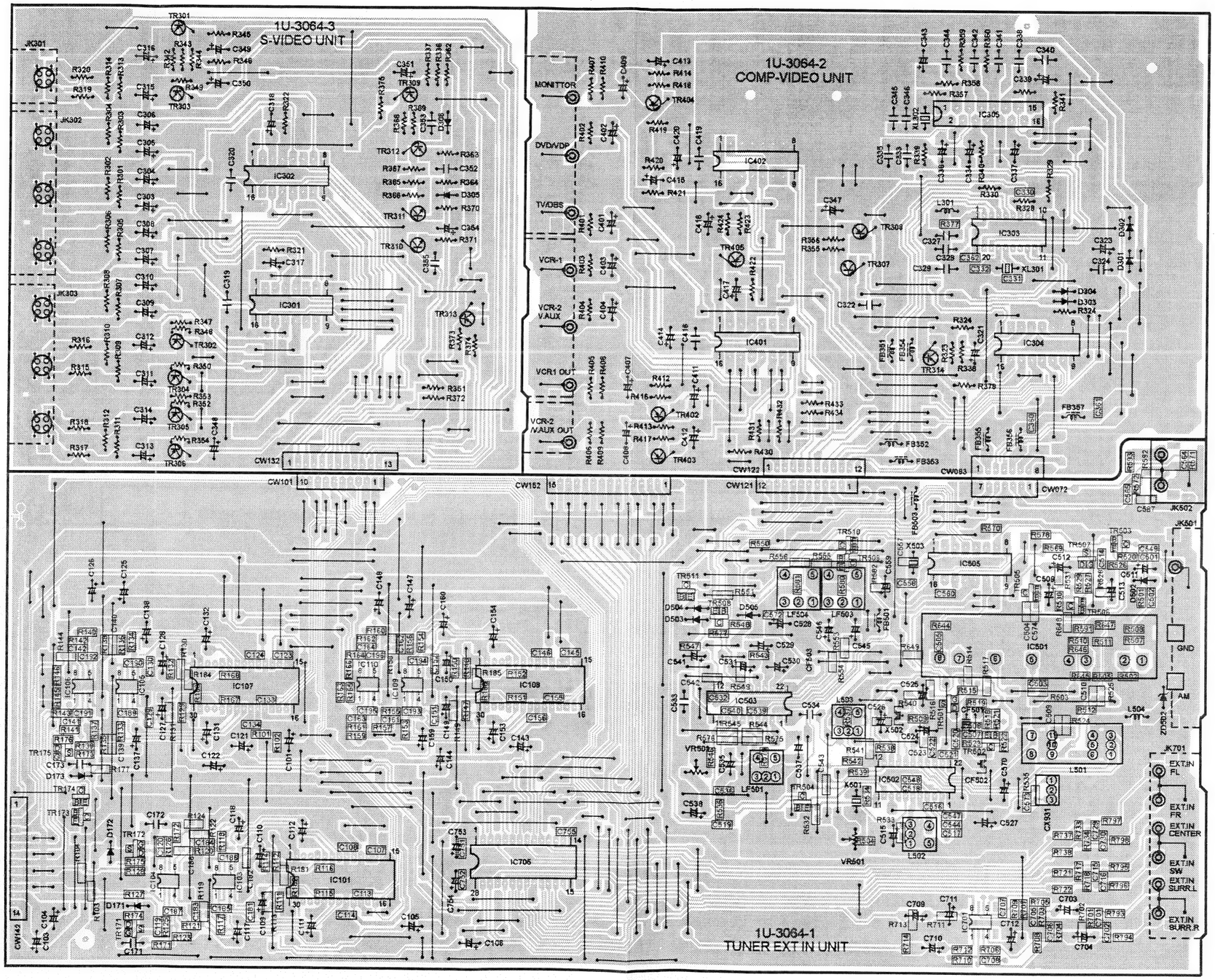
1U-3063-1 INPUT SURROUND UNIT



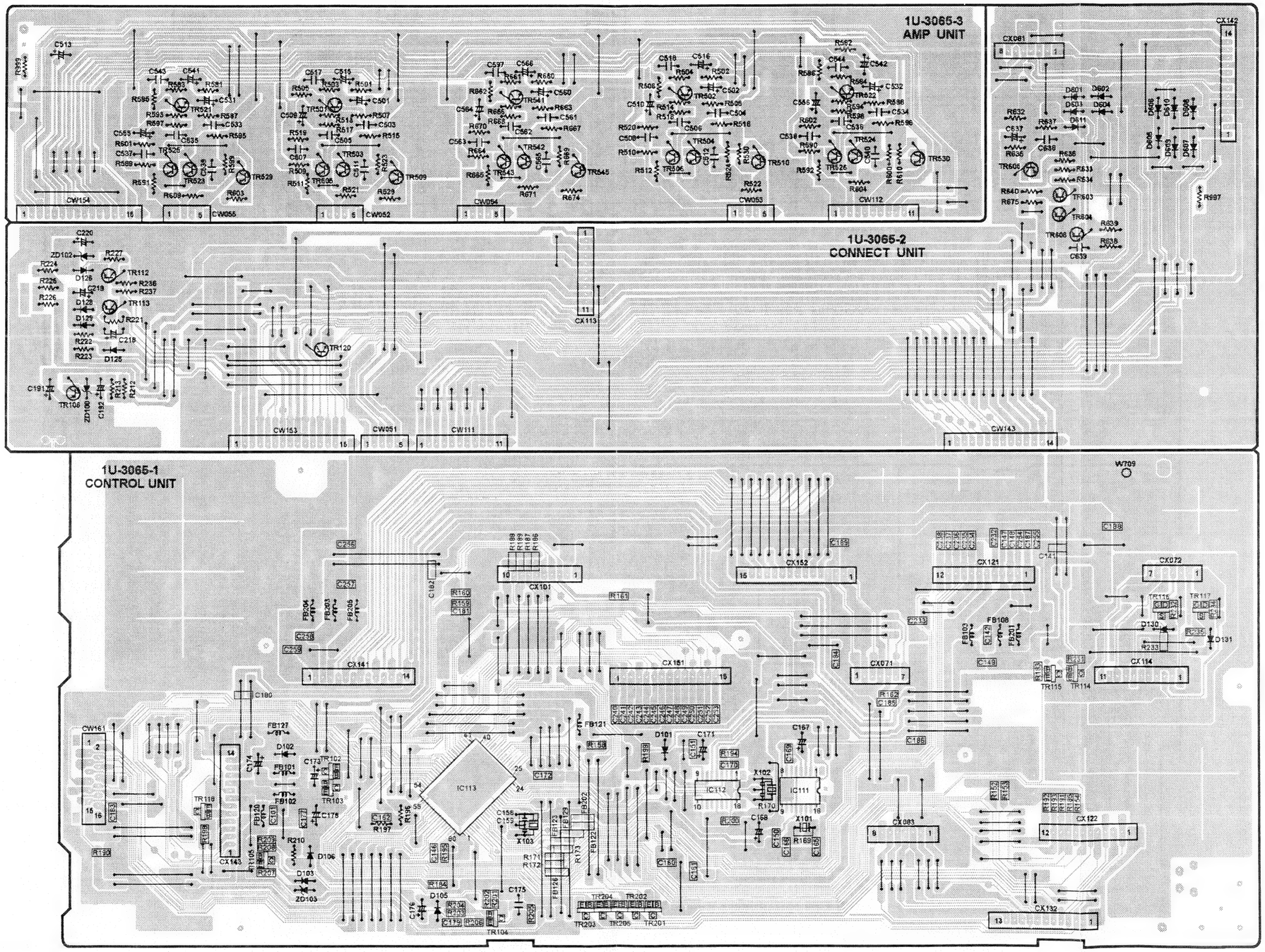
1U-3063-2 DISPLAY UNIT



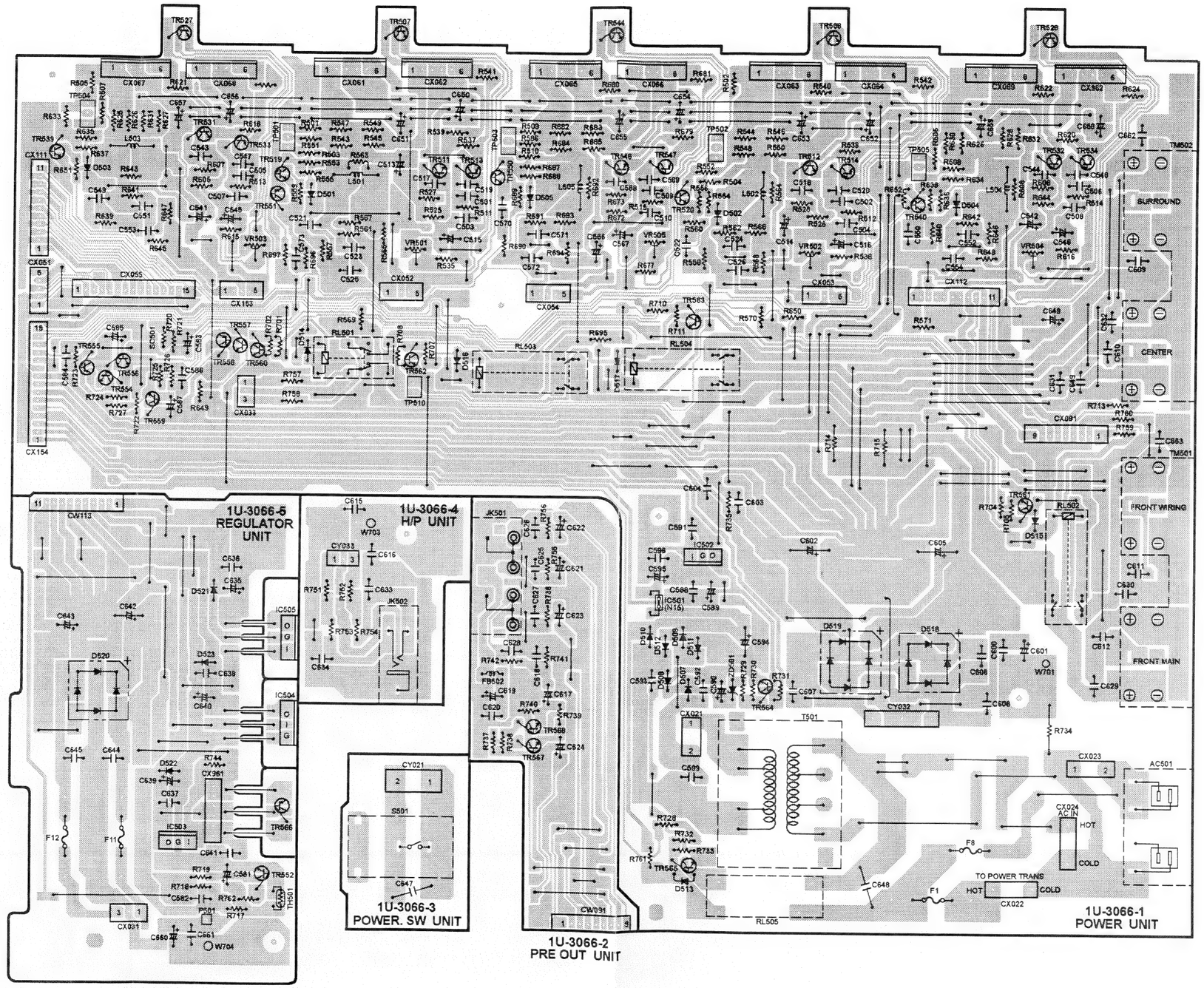
1U-3064


1U-3064-3
S-VIDEO UNIT
1U-3064-2
COMP-VIDEO UNIT
1U-3064-1
TUNER EXT IN UNIT
MONITTOR
DVD/VDP
TV/DBS
VCR-1
VCR-2 /AUX
VCR1 OUT
VCR-2 /AUX OUT
EXT.IN FL
EXT.IN FR
EXT.IN CENTER
EXT.IN SW
EXT.IN SURR.L
EXT.IN SURR.R
GND
AM

1U-3065


1U-3065-3
AMP UNIT
1U-3065-2
CONNECT UNIT
1U-3065-1
CONTROL UNIT

1U-3066


1U-3066-5
REGULATOR
UNIT
1U-3066-4
H/P UNIT
1U-3066-3
POWER. SW UNIT
1U-3066-2
PRE OUT UNIT
1U-3066-1
POWER UNIT
SURROUND
CENTER
FRONT WIRING
FRONT MAIN
TO POWER TRANS
HOT
COLD
AC IN

# NOTE FOR PARTS LIST

- Part indicated with the mark "⊙" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including Carbon Film ±5%, 1/4W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

**WARNING:**

Parts marked with this symbol ⚠ ▓▓ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

## ● Resistors

Ex.: RN (Type) 14K (Shape and performance) 2E (Power) 182 (Resistance) G (Allowable error) FR (Others)

| | | | |
|---|---|---|---|
| RD : Carbon<br>RC : Composition<br>RS : Metal oxide film<br>RW : Winding<br>RN : Metal film<br>RK : Metal mixture | 2B : 1/8W<br>2E : 1/4W<br>2H : 1/2W<br>3A : 1W<br>3D : 2W<br>3F : 3W<br>3H : 5W | F : ±1%<br>G : ±2%<br>J : ±5%<br>K : ±10%<br>M : ±20% | P : Pulse-resistant type<br>NL : Low noise type<br>NB : Non-burning type<br>FR : Fuse-resistor<br>F : Lead wire forming |

*** Resistance**

1 8 2 ⇒ 1800 ohm = 1.8 kohm
Indicates number of zeros after effective number.
2-digit effective number.
• Units: ohm

1 R 2 ⇒ 1.2 ohm
1-digit effective number.
2-digit effective number, decimal point indicated by R.
• Units: ohm

## ● Capacitors

Ex.: CE (Type) 04W (Shape and performance) 1H (Dielectric strength) 2R2 (Capacity) M (Allowable error) BP (Others)

| | | | |
|---|---|---|---|
| CE : Aluminum foil electrolytic<br>CA : Aluminum solid electrolytic<br>CS : Tantalum electrolytic<br>CQ : Film<br>CK : Ceramic<br><br>CC : Ceramic<br>CP : Oil<br>CM : Mica<br>CF : Metallized<br>CH : Metallized | 0J : 6.3V<br>1A : 10V<br>1C : 16V<br>1E : 25V<br>1V : 35V<br>1H : 50V<br>2A : 100V<br>2B : 125V<br>2C : 160V<br>2D : 200V<br>2E : 250V<br>2H : 500V<br>2J : 630V | F : ±1%<br>G : ±2%<br>J : ±5%<br>K : ±10%<br>M : ±20%<br>Z : +80% −20%<br>P : +100% −0%<br>C : ±0.25pF<br>D : ±0.5pF<br>= : Others | HS : High stability type<br>BP : Non-polar type<br>HR : Ripple-resistant type<br>DL : For change and discharge<br>HF : For assuring high frequency<br>U : UL part<br>C : CSA part<br>W : UL-CSA type<br>F : Lead wire forming |

*** Capacity (electrolyte only)**

2 2 2 ⇒ 2200μF
Indicates number of zeros after effective number.
2-digit effective number.
• Units: μF.

2 R 2 ⇒ 2.2μF
1-digit effective number.
2-digit effective number, decimal point indicated by R.
• Units: μF.

*** Capacity (except electrolyte)**

2 2 2 ⇒ 2200pF=0.0022μF
(More than 2) — Indicates number of zeros after effective number.
2-digit effective number.
• Units: μF.

2 2 1 ⇒ 220pF
(0 or 1) — Indicates number of zeros after effective number.
2-digit effective number.
• Units: pF.

• When the dielectric strength is indicated in AC, "AC" is included after the dieelectric strength value.

# PARTS LIST OF P.W.B. UNIT ASS'Y

## 1U-3063 AUDIO IN DISP UNIT ASS'Y

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| **SEMICONDUCTORS GROUP** | | | |
| IC101 | 499 0290 007 | Remocon sensor GP1U271X | |
| IC102 | 262 2035 008 | IC MSC1937-03RS | |
| IC201 | 263 0896 909 | IC NJM2068MD | |
| IC401 | 262 2342 005 | IC NJU9702G | |
| IC402 | 262 1875 900 | IC BU4066BCF | |
| IC403 | 263 0938 003 | IC DDSC-A | |
| IC404,405 | 263 0615 902 | IC BA15218F | |
| IC501 | 263 0896 909 | IC NJM2068MD | |
| IC601 | 263 0896 909 | IC NJM2068MD | |
| IC603 | 262 2034 009 | IC TC9273N-007 | |
| IC704 | 263 0359 006 | IC LC4966 | |
| IC706 | 263 0615 902 | IC BA15218F | |
| TR103 | 269 0020 906 | Transistor DTC114ES(10K-10K) | |
| TR106 | 269 0046 906 | Transistor DTA114ES(10K-10K) | |
| TR401 | 274 0169 908 | Transistor 2SD1292(R) | |
| TR402~406 | 269 0054 901 | Transistor DTC144EK | |
| TR701 | 269 0054 901 | Transistor DTC144EK | |
| TR702 | 269 0055 900 | Transistor DTA144EK | |
| TR703,704 | 269 0054 901 | Transistor DTC144EK | |
| TR705 | 269 0055 900 | Transistor DTA144EK | |
| TR706 | 269 0054 901 | Transistor DTC144EK | |
| LD101 | 393 9452 904 | LED SEL1410E | Green |
| LD103 | 393 9434 906 | LED SEL1210S | Red |
| LD110,111 | 393 9452 904 | LED SEL1410E | Green |
| ZD101,102 | 276 0637 902 | Zener diode MTZJ6.2A | 6.2V |
| ZD103 | 276 0644 937 | Zener diode MTZJ9.1A | 9.1V |
| ZD401 | 276 0637 902 | Zener diode MTZJ6.2A | 6.2V |
| **RESISTORS GROUP** | | | |
| R401 | 247 0014 967 | Carbon chip 1 Mohm 1/10W | RM73B--105J |
| R402 | 247 0010 945 | Carbon chip 18 kohm 1/10W | RM73B--183J |
| R403 | 247 0009 927 | Carbon chip 5.6 kohm 1/10W | RM73B--562J |
| R404,405 | 247 0003 936 | Carbon chip 20 ohm 1/10W | RM73B--200J |
| R406 | 247 0010 945 | Carbon chip 13 kohm 1/10W | RM73B--183J |
| R407 | 247 0009 956 | Carbon chip 7.5 kohm 1/10W | RM73B--752J |
| R408,409 | 247 0010 929 | Carbon chip 15 kohm 1/10W | RM73B--153J |
| R410 | 241 2387 908 | Carbon film 1 ohm 1/4W(NB) | RD14B2E010JNBS |
| R411 | 247 0007 945 | Carbon chip 1 kohm 1/10W | RM73B--102J |
| R412~414 | 247 0009 969 | Carbon chip 8.2 kohm 1/10W | RM73B--822J |
| R415~417 | 247 0011 944 | Carbon chip 47 kohm 1/10W | RM73B--473J |
| R418 | 247 0013 942 | Carbon chip 330 kohm 1/10W | RM73B--334J |

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| R419 | 247 0009 969 | Carbon chip 8.2 kohm 1/10W | RM73B--822J |
| R420,421 | 247 0010 929 | Carbon chip 15 kohm 1/10W | RM73B--153J |
| R422 | 247 0019 988 | Carbon chip 100 kohm 1/10W | RM73B--104F |
| R423 | 247 0009 956 | Carbon chip 7.5 kohm 1/10W | RM73B--752J |
| R424 | 247 0011 944 | Carbon chip 47 kohm 1/10W | RM73B--473J |
| R425 | 247 0010 929 | Carbon chip 15 kohm 1/10W | RM73B--153J |
| R426 | 247 0009 956 | Carbon chip 7.5 kohm 1/10W | RM73B--752J |
| R427 | 247 0011 944 | Carbon chip 47 kohm 1/10W | RM73B--473J |
| R428 | 247 0010 929 | Carbon chip 15 kohm 1/10W | RM73B--153J |
| R429 | 247 0016 923 | Carbon chip 4.7 Mohm 1/10W | RM73B--475K |
| R430,431 | 247 0011 960 | Carbon chip 56 kohm 1/10W | RM73B--563J |
| R432 | 247 0012 927 | Carbon chip 100 kohm 1/10W | RM73B--104J |
| R433,434 | 247 0011 944 | Carbon chip 47 kohm 1/10W | RM73B--473J |
| R435 | 247 0012 927 | Carbon chip 100 kohm 1/10W | RM73B--104J |
| R441,442 | 247 0009 985 | Carbon chip 10 kohm 1/10W | RM73B--103J |
| R443 | 247 0013 984 | Carbon chip 470 kohm 1/10W | RM73B--474J |
| R446 | 247 0007 945 | Carbon chip 1 kohm 1/10W | RM73B--102J |
| R447 | 247 0009 901 | Carbon chip 4.7 kohm 1/10W | RM73B--472J |
| R449 | 247 0009 969 | Carbon chip 8.2 kohm 1/10W | RM73B--822J |
| R450 | 247 0008 986 | Carbon chip 3.9 kohm 1/10W | RM73B--392J |
| R451 | 247 0005 905 | Carbon chip 100 ohm 1/10W | RM73B--101J |
| R452 | 247 0012 927 | Carbon chip 100 kohm 1/10W | RM73B--104J |
| R453,454 | 247 0011 944 | Carbon chip 47 kohm 1/10W | RM73B--473J |
| R456 | 247 0005 905 | Carbon chip 100 ohm 1/10W | RM73B--101J |
| R459 | 247 0013 984 | Carbon chip 470 kohm 1/10W | RM73B--474J |
| R461 | 247 0005 905 | Carbon chip 100 ohm 1/10W | RM73B--101J |
| R462 | 247 0012 927 | Carbon chip 100 kohm 1/10W | RM73B--104J |
| R463 | 247 0009 901 | Carbon chip 4.7 kohm 1/10W | RM73B--472J |
| R464 | 247 0018 905 | Carbon chip 0 ohm 1/10W | RM73B--0R0K |
| R465 | 247 0009 901 | Carbon chip 4.7 kohm 1/10W | RM73B--472J |
| R466 | 247 0005 905 | Carbon chip 100 ohm 1/10W | RM73B--101J |
| R467 | 247 0012 927 | Carbon chip 100 kohm 1/10W | RM73B--104J |
| R472 | 247 0011 944 | Carbon chip 47 kohm 1/10W | RM73B--473J |
| R476 | 247 0011 944 | Carbon chip 47 kohm 1/10W | RM73B--473J |
| R477 | 247 0018 905 | Carbon chip 0 ohm 1/10W | RM73B--0R0K |
| R501~504 | 247 0012 927 | Carbon chip 100 kohm 1/10W | RM73B--104J |
| R505,506 | 247 0005 905 | Carbon chip 100 ohm 1/10W | RM73B--101J |
| R509,510 | 247 0018 905 | Carbon chip 0 ohm 1/10W | RM73B--0R0K |
| R511~514 | 247 0005 905 | Carbon chip 100 ohm 1/10W | RM73B--101J |
| R515~518 | 247 0012 927 | Carbon chip 100 kohm 1/10W | RM73B--104J |
| R519~522 | 247 0006 962 | Carbon chip 470 ohm 1/10W | RM73B--471J |
| R523~526 | 247 0015 966 | Carbon chip 2.7 Mohm 1/10W | RM73B--275J |
| R601,602 | 247 0018 905 | Carbon chip 0 ohm 1/10W | RM73B--0R0K |
| R603,604 | 247 0006 946 | Carbon chip 390 ohm 1/10W | RM73B--391J |
| R605,606 | 247 0011 986 | Carbon chip 68 kohm 1/10W | RM73B--683J |
| R607,608 | 247 0012 969 | Carbon chip 150 kohm 1/10W | RM73B--154J |
| R609,610 | 247 0004 922 | Carbon chip 47 ohm 1/10W | RM73B--470J |
| R611,612 | 247 0005 992 | Carbon chip 240 ohm 1/10W | RM73B--241J |
| R613,614 | 247 0012 956 | Carbon chip 130 kohm 1/10W | RM73B--134J |
| R615,616 | 247 0009 998 | Carbon chip 11 kohm 1/10W | RM73B--113J |

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| R617,618 | 247 0003 949 | Carbon chip 22 ohm 1/10W | RM73B--220J |
| R619,620 | 247 0005 905 | Carbon chip 100 ohm 1/10W | RM73B--101J |
| R621,622 | 247 0011 944 | Carbon chip 47 kohm 1/10W | RM73B--473J |
| R625~634 | 247 0015 966 | Carbon chip 2.7 Mohm 1/10W | RM73B--275J |
| R635~644 | 247 0006 962 | Carbon chip 470 ohm 1/10W | RM73B--471J |
| R663,664 | 247 0006 962 | Carbon chip 470 ohm 1/10W | RM73B--471J |
| R665,666 | 247 0015 966 | Carbon chip 2.7 Mohm 1/10W | RM73B--275J |
| R749~752 | 247 0011 944 | Carbon chip 47 kohm 1/10W | RM73B--473J |
| R799~802 | 247 0010 961 | Carbon chip 22 kohm 1/10W | RM73B--223J |
| R803 | 247 0018 905 | Carbon chip 0 ohm 1/10W | RM73B--0R0K |
| R804,805 | 247 0009 901 | Carbon chip 4.7 kohm 1/10W | RM73B--472J |
| R806 | 247 0005 905 | Carbon chip 100 ohm 1/10W | RM73B--101J |
| R807 | 247 0012 927 | Carbon chip 100 kohm 1/10W | RM73B--104J |
| VR201 | 211 0883 018 | Variable resistor 30 kohm | V14P25FC303K |
| VR202 | 211 0883 005 | Variable resistor 10 kohm | V14P25FC103K |
| **CAPACITORS GROUP** | | | |
| C101 | 253 9039 906 | BC ceramic cap. 0.1 µF/25V | CK45=1E104Z(DD-3) |
| C102 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |
| C104 | 254 4196 944 | Electrolytic 1 µF/50V | CE04W1H010M(SRA) |
| C106 | 254 4261 921 | Electrolytic 100 µF/50V | CE04W1H101M |
| C107 | 253 1181 904 | Ceramic 0.01 µF/50V | CK45F1H103Z(DD-3) |
| C108 | 254 4250 945 | Electrolytic 330 µF/6.3V | CE04W0J331M |
| C109 | 253 1179 903 | Ceramic 100 pF/50V | CK45B1H101K(DD-3) |
| C110,111 | 253 1181 904 | Ceramic 0.01 µF/50V | CK45F1H103Z(DD-3) |
| C117 | 256 1034 979 | Metalized 0.1 µF/50V | CF93A1H104J |
| C201,202 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |
| C203,204 | 254 4254 938 | Electrolytic 47 µF/16V | CE04W1C470M |
| C205,206 | 253 4537 924 | Ceramic 33 pF/50V | C45SL1H330J(DD-3) |
| C207,208 | 255 1264 940 | Mylar film 2200 pF/50V | CQ93M1H222J(B) |
| C209,210 | 256 1035 907 | Metallized 0.18 µF/50V | CF93A1H184J |
| C211,212 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |
| C215,216 | 255 1265 949 | Mylar film 0.012 µF/50V | CQ93M1H123J(B) |
| C217,218 | 256 1034 940 | Metallized 0.056 µF/50V | CF93A1H563J |
| C219,220 | 254 4260 922 | Electrolytic 0.33 µF/50V | CE04W1HR33M |
| C231,232 | 253 4538 949 | Ceramic 100 pF/50V | C45SL1H101J(DD-3) |
| C233,234 | 254 4260 980 | Electrolytic 10 µF/50V | CE04W1H100M |
| C401 | 257 0014 935 | Ceramic chip 0.1 µF/25V | CK73F1E104Z |
| C402,403 | 257 0005 944 | Ceramic chip 220 pF/50V | CC73SL1H221J |
| C404 | 257 0006 927 | Ceramic chip 470 pF/50V | CC73SL1H471J |
| C405 | 257 0011 996 | Ceramic chip 0.1 µF/25V | CK73B1E104K |
| C406 | 254 4254 938 | Electrolytic 47 µF/16V | CE04W1C470M |
| C407,408 | 257 0011 983 | Ceramic chip 0.047 µF/25V | CK73B1E473K |
| C409 | 257 0011 996 | Ceramic chip 0.1 µF/25V | CK73B1E104K |
| C410 | 257 0006 927 | Ceramic chip 470 pF/50V | CC73SL1H471J |
| C411,412 | 257 0009 979 | Ceramic chip 5600 pF/50V | CK73B1H562K |
| C413 | 257 0009 940 | Ceramic chip 3300 pF/50V | CK73B1H332K |

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| C414 | 254 4252 930 | Electrolytic 100 µF/10V | CE04W1A101M |
| C415 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C416 | 257 0014 935 | Ceramic chip 0.1 µF/25V | CK73F1E104Z |
| C417 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |
| C418 | 256 1035 978 | Metalized 0.68 µF/50V | CF93A1H684J |
| C421 | 257 0009 924 | Ceramic chip 2200 pF/50V | CK73B1H222K |
| C422 | 257 0006 927 | Ceramic chip 470 pF/50V | CC73SL1H471J |
| C423 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |
| C424 | 256 1034 937 | Metallized 0.047 µF/50V | CF93A1H473J |
| C425 | 254 4250 958 | Electrolytic 470 µF/6.3V | CE04W0J471M |
| C426 | 255 1264 995 | Mylar film 5600 pF/50V | CQ93M1H562J(B) |
| C427 | 254 4254 941 | Electrolytic 100 µF/16V | CE04W1C101M |
| C428~430 | 256 1035 910 | Metallized 0.22 µF/16V | CF93A1H224J |
| C431,432 | 254 4260 977 | Electrolytic 4.7 µF/50V | CE04W1H4R7M |
| C433 | 256 1035 910 | Metallized 0.22 µF/16V | CF93A1H224J |
| C434~437 | 256 1034 979 | Metalized 0.1 µF/50V | CF93A1H104J |
| C438,439 | 255 1265 978 | Mylar film 0.022 µF/50V | CQ93M1H223J(B) |
| C440,441 | 256 1034 979 | Metalized 0.1 µF/50V | CF93A1H104J |
| C442 | 257 0006 969 | Ceramic chip 680 pF/50V | CC73SL1H681J |
| C443 | 256 1034 937 | Metallized 0.047 µF/50V | CF93A1H473J |
| C444,445 | 256 1034 979 | Metalized 0.1 µF/50V | CF93A1H104J |
| C446 | 257 0006 969 | Ceramic chip 680 pF/50V | CC73SL1H681J |
| C447 | 256 1034 937 | Metallized 0.047 µF/50V | CF93A1H473J |
| C448 | 254 4254 912 | Electrolytic 22 µF/16V | CE04W1C220M |
| C449~452 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C453 | 254 4254 912 | Electrolytic 22 µF/16V | CE04W1C220M |
| C454 | 255 1264 982 | Mylar film 4700 pF/50V | CQ93M1H472J(B) |
| C455 | 254 4252 930 | Electrolytic 100 µF/10V | CE04W1A101M |
| C456 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C457 | 256 1035 910 | Metallized 0.22 µF/16V | CF93A1H224J |
| C460 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C461 | 255 1264 953 | Mylar film 2700 pF/50V | CQ93M1H272J(B) |
| C462 | 255 1264 995 | Mylar film 5600 pF/50V | CQ93M1H562J(B) |
| C466,467 | 256 1034 979 | Metalized 0.1 µF/50V | CF93A1H104J |
| C469~471 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C474,475 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |
| C476 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C479 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C481 | 257 0004 961 | Ceramic chip 100 pF/50V | CC73SL1H101J |
| C482 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C483 | 257 0014 935 | Ceramic chip 0.1 µF/25V | CK73F1E104Z |
| C484 | 257 0008 983 | Ceramic chip 1000 pF/50V | CK73B1H102K |
| C501,502 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C505,506 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |
| C507,508 | 254 4254 941 | Electrolytic 100 µF/16V | CE04W1C101M |
| C509~512 | 257 0004 961 | Ceramic chip 100 pF/50V | CC73SL1H101J |
| C601,602 | 257 0005 944 | Ceramic chip 220 pF/50V | CC73SL1H221J |
| C603,604 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C605,606 | 257 0004 961 | Ceramic chip 100 pF/50V | CC73SL1H101J |
| C607,608 | 254 4250 932 | Electrolytic 220 µF/6.3V | CE04W0J221M |

# PARTS LIST OF P.W.B. UNIT ASS'Y

## 1U-3064 TU VR VIDEO UNIT ASS'Y

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| C609,610 | 255 4199 999 | Mylar film 0.024 µF/50V | Q92M1H243J(MRZ) |
| C611,612 | 255 1265 907 | Mylar film 6800 pF/50V | CQ93M1H682J(B) |
| C613,614 | 254 4254 938 | Electrolytic 47 µF/16V | CE04W1C470M |
| C615,616 | 257 0012 982 | Ceramic chip 0.022 µF/50V | CK73F1H223Z |
| C645 | 257 0012 966 | Ceramic chip 0.01 µF/50V | CK73F1H103Z |
| C647 | 257 0012 966 | Ceramic chip 0.01 µF/50V | CK73F1H103Z |
| C649 | 254 4260 977 | Electrolytic 4.7 µF/50V | CE04W1H4R7M |
| C651 | 254 4260 977 | Electrolytic 4.7 µF/50V | CE04W1H4R7M |
| C661,662 | 257 0004 961 | Ceramic chip 100 pF/50V | CC73SL1H101J |
| C745 | 257 0012 966 | Ceramic chip 0.01 µF/50V | CK73F1H103Z |
| C747 | 257 0012 966 | Ceramic chip 0.01 µF/50V | CK73F1H103Z |
| C756~758 | 257 0004 961 | Ceramic chip 100 pF/50V | CC73SL1H101J |
| C760 | 257 0004 961 | Ceramic chip 100 pF/50V | CC73SL1H101J |
| C761,762 | 254 4260 980 | Electrolytic 10 µF/50V | CE04W1H100M |
| C763,764 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |
| C999 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |
| **OTHER PARTS GROUP** | | | **Q'ty** |
| CW071 | 205 0942 022 | 7P connector socket(TUC-P) | 1 |
| CW114 | 205 0885 066 | 11P connector socket (TUC-P) | 1 |
| CW141 | 205 0885 011 | 14P connector socket (TUC-P) | 1 |
| CW151 | 205 0885 040 | 15P connector socket (TUC-P) | 1 |
| CX025 | 205 0644 003 | 2P wrapping terminal | 1 |
| CX161 | 205 1055 028 | 16P connector base (TKC-V) | 1 |
| CY081 | 204 2446 015 | 8P PH-SAN cord | 1 |
| FB401,402 | 235 0049 900 | Beads inductor | 2 |
| FL101 | 393 4156 001 | FLD FIP16FM7R | 1 |
| JK501 | 204 8543 006 | 6 P pin jack | 1 |
| JK601,602 | 204 8543 006 | 6 P pin jack | 2 |
| L101 | 235 0060 989 | Inductor 120 µH | 1 |
| L401 | 235 0060 989 | Inductor 120 µH | 1 |
| S101~114 | 212 5604 910 | Tact switch -TA (ALPS) | 16 |
| S116~127 | 212 5604 910 | Tact switch -TA (ALPS) | 14 |
| S128 | 212 0373 000 | Rotary encorder EC16B | 1 |
| XT401 | 399 0223 907 | Ceramic 2.00 MHz CSA2.00MG-TF01 | 1 |

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| **SEMICONDUCTORS GROUP** | | | |
| IC101 | 262 2214 007 | IC LC7536 | |
| IC103,104 | 263 0896 909 | IC NJM2068MD | |
| IC105,106 | 263 0615 902 | IC BA15218F | |
| IC107,108 | 262 2214 007 | IC LC7536 | |
| IC109,110 | 263 0615 902 | IC BA15218F | |
| IC401 | 263 0856 004 | IC BA7625 | |
| IC501 | 216 0102 008 | Front end | |
| IC502 | 263 0891 001 | IC LA1265(S) | |
| IC503 | 263 0439 007 | IC LA3401 | |
| IC505 | 262 2348 009 | IC LM7001JU | |
| IC701 | 263 0896 909 | IC NJM2068MD | |
| IC705 | 262 2397 005 | IC NJU7312AL | |
| TR402~404 | 271 0290 904 | Transistor 2PA1015GR | |
| TR502 | 273 0411 909 | Transistor 2SC2996-Y | |
| TR503,504 | 269 0083 901 | Transistor DTA114EK | |
| TR505 | 269 0114 906 | Transistor RN2402 | |
| TR506 | 273 0403 904 | Transistor 2SC2712-Y/GR | |
| TR507 | 275 0094 908 | FET 2SK209-GR | |
| TR508 | 269 0054 901 | Transistor DTC144EK | |
| TR509,510 | 269 0066 902 | Transistor DTC323TK | |
| TR511 | 269 0086 908 | Transistor DTA114TK | |
| D501 | 276 0432 903 | Diode 1SS270A | |
| D503~505 | 276 0432 903 | Diode 1SS270A | |
| ZD502 | 276 0644 937 | Zener diode MTZJ9.1A | 9.1V |
| **RESISTORS GROUP** | | | |
| R101 | 247 0009 901 | Carbon chip 4.7 kohm 1/10W | RM73B--472J |
| R102 | 247 0008 960 | Carbon chip 3.3 kohm 1/10W | RM73B--332J |
| R111,112 | 247 0011 944 | Carbon chip 47 kohm 1/10W | RM73B--473J |
| R113,114 | 247 0013 900 | Carbon chip 220 kohm 1/10W | RM73B--224J |
| R115,116 | 247 0011 944 | Carbon chip 47 kohm 1/10W | RM73B--473J |
| R117,118 | 247 0005 905 | Carbon chip 100 ohm 1/10W | RM73B--101J |
| R119,120 | 247 0012 927 | Carbon chip 100 kohm 1/10W | RM73B--104J |
| R121,122 | 247 0005 905 | Carbon chip 100 ohm 1/10W | RM73B--101J |
| R125,126 | 247 0018 905 | Carbon chip 0 ohm 1/10W | RM73B--0R0 |
| R127,128 | 247 0005 905 | Carbon chip 100 ohm 1/10W | RM73B--101J |
| R129,130 | 247 0011 944 | Carbon chip 47 kohm 1/10W | RM73B--473J |
| R131,132 | 247 0013 900 | Carbon chip 220 kohm 1/10W | RM73B--224J |
| R133,134 | 247 0005 905 | Carbon chip 100 ohm 1/10W | RM73B--101J |
| R135,136 | 247 0012 927 | Carbon chip 100 kohm 1/10W | RM73B--104J |
| R137,138 | 247 0005 905 | Carbon chip 100 ohm 1/10W | RM73B--101J |
| R139,140 | 247 0007 916 | Carbon chip 750 ohm 1/10W | RM73B--751J |
| R141 | 247 0009 901 | Carbon chip 4.7 kohm 1/10W | RM73B--472J |
| R142 | 247 0009 914 | Carbon chip 5.1 kohm 1/10W | RM73B--512J |
| R143,144 | 247 0005 905 | Carbon chip 100 ohm 1/10W | RM73B--101J |

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| R145,146 | 247 0012 927 | Carbon chip 100 kohm 1/10W | RM73B--104J |
| R147,148 | 247 0011 944 | Carbon chip 47 kohm 1/10W | RM73B--473J |
| R149,150 | 247 0013 900 | Carbon chip 220 kohm 1/10W | RM73B--224J |
| R151,152 | 247 0011 944 | Carbon chip 47 kohm 1/10W | RM73B--473J |
| R153,154 | 247 0005 905 | Carbon chip 100 ohm 1/10W | RM73B--101J |
| R155,156 | 247 0012 927 | Carbon chip 100 kohm 1/10W | RM73B--104J |
| R157,158 | 247 0005 905 | Carbon chip 100 ohm 1/10W | RM73B--101J |
| R159,160 | 247 0007 916 | Carbon chip 750 ohm 1/10W | RM73B--751J |
| R161,162 | 247 0009 901 | Carbon chip 4.7 kohm 1/10W | RM73B--472J |
| R163,164 | 247 0005 905 | Carbon chip 100 ohm 1/10W | RM73B--101J |
| R165,166 | 247 0012 927 | Carbon chip 100 kohm 1/10W | RM73B--104J |
| R167,168 | 247 0011 944 | Carbon chip 47 kohm 1/10W | RM73B--473J |
| R181~186 | 247 0018 905 | Carbon chip 0 ohm 1/10W | RM73B--0R0K |
| R501 | 247 0002 966 | Carbon chip 10 ohm 1/10W | RM73B--100J |
| R503 | 247 0007 945 | Carbon chip 1 kohm 1/10W | RM73B--102J |
| R504,505 | 247 0018 905 | Carbon chip 0 ohm 1/10W | RM73B--0R0K |
| R507~512 | 247 0018 905 | Carbon chip 0 ohm 1/10W | RM73B--0R0K |
| R514,515 | 247 0005 905 | Carbon chip 100 ohm 1/10W | RM73B--101J |
| R516 | 247 0007 945 | Carbon chip 1 kohm 1/10W | RM73B--102J |
| R518 | 247 0005 989 | Carbon chip 220 ohm 1/10W | RM73B--221J |
| R519 | 247 0006 962 | Carbon chip 470 ohm 1/10W | RM73B--471J |
| R520 | 247 0007 945 | Carbon chip 1 kohm 1/10W | RM73B--102J |
| R521 | 247 0009 901 | Carbon chip 4.7 kohm 1/10W | RM73B--472J |
| R522 | 247 0006 920 | Carbon chip 330 ohm 1/10W | RM73B--331J |
| R523 | 247 0007 961 | Carbon chip 1.2 kohm 1/10W | RM73B--122J |
| R524,525 | 247 0012 927 | Carbon chip 100 kohm 1/10W | RM73B--104J |
| R526 | 247 0005 905 | Carbon chip 100 ohm 1/10W | RM73B--101J |
| R527 | 247 0009 969 | Carbon chip 8.2 kohm 1/10W | RM73B--822J |
| R528 | 247 0008 986 | Carbon chip 3.9 kohm 1/10W | RM73B--392J |
| R529 | 247 0006 946 | Carbon chip 390 ohm 1/10W | RM73B--391J |
| R530 | 247 0005 947 | Carbon chip 150 ohm 1/10W | RM73B--151J |
| R531 | 247 0018 905 | Carbon chip 0 ohm 1/10W | RM73B--0R0K |
| R532 | 247 0005 921 | Carbon chip 120 ohm 1/10W | RM73B--121J |
| R533 | 247 0010 929 | Carbon chip 15 kohm 1/10W | RM73B--153J |
| R534 | 247 0005 921 | Carbon chip 120 ohm 1/10W | RM73B--121J |
| R535 | 247 0010 945 | Carbon chip 18 kohm 1/10W | RM73B--183J |
| R536 | 247 0018 905 | Carbon chip 0 ohm 1/10W | RM73B--0R0K |
| R537 | 247 0011 986 | Carbon chip 68 kohm 1/10W | RM73B--683J |
| R538 | 247 0009 943 | Carbon chip 6.8 kohm 1/10W | RM73B--682J |
| R539 | 247 0009 927 | Carbon chip 5.6 kohm 1/10W | RM73B--562J |
| R540,541 | 247 0009 985 | Carbon chip 10 kohm 1/10W | RM73B--103J |
| R542,543 | 247 0008 960 | Carbon chip 3.3 kohm 1/10W | RM73B--332J |
| R544,545 | 247 0012 927 | Carbon chip 100 kohm 1/10W | RM73B--104J |
| R546 | 247 0011 973 | Carbon chip 62 kohm 1/10W | RM73B--623J |
| R547 | 247 0012 927 | Carbon chip 100 kohm 1/10W | RM73B--104J |
| R548 | 247 0009 985 | Carbon chip 10 kohm 1/10W | RM73B--103J |
| R549 | 247 0012 927 | Carbon chip 100 kohm 1/10W | RM73B--104J |
| R550 | 247 0009 927 | Carbon chip 5.6 kohm 1/10W | RM73B--562J |
| R551 | 247 0009 985 | Carbon chip 10 kohm 1/10W | RM73B--103J |
| R553,554 | 247 0008 960 | Carbon chip 3.3 kohm 1/10W | RM73B--332J |
| R555,556 | 247 0009 927 | Carbon chip 5.6 kohm 1/10W | RM73B--562J |

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| R569 | 247 0009 985 | Carbon chip 10 kohm 1/10W | RM73B--103J |
| R571,572 | 247 0015 966 | Carbon chip 2.7 Mohm 1/10W | RM73B--275J |
| R575,576 | 247 0012 943 | Carbon chip 120 kohm 1/10W | RM73B--124J |
| R577 | 247 0010 961 | Carbon chip 22 kohm 1/10W | RM73B--223J |
| R578~581 | 247 0018 905 | Carbon chip 0 ohm 1/10W | RM73B--0R0K |
| R582 | 247 0002 966 | Carbon chip 10 ohm 1/10W | RM73B--100J |
| R592,593 | 247 0006 962 | Carbon chip 470 ohm 1/10W | RM73B--471J |
| R644 | 247 0018 905 | Carbon chip 0 ohm 1/10W | RM73B--0R0K |
| R647~649 | 247 0018 905 | Carbon chip 0 ohm 1/10W | RM73B--0R0K |
| R701,702 | 247 0011 973 | Carbon chip 62 kohm 1/10W | RM73B--623J |
| R703,704 | 247 0012 998 | Carbon chip 200 kohm 1/10W | RM73B--204J |
| R705,706 | 247 0006 962 | Carbon chip 470 ohm 1/10W | RM73B--471J |
| R709,710 | 247 0018 905 | Carbon chip 0 ohm 1/10W | RM73B--0R0K |
| R711,712 | 247 0005 905 | Carbon chip 100 ohm 1/10W | RM73B--101J |
| R713,714 | 247 0012 927 | Carbon chip 100 kohm 1/10W | RM73B--104J |
| R717,718 | 247 0015 966 | Carbon chip 2.7 Mohm 1/10W | RM73B--275J |
| R721,722 | 247 0006 962 | Carbon chip 470 ohm 1/10W | RM73B--471J |
| R733,734 | 247 0015 966 | Carbon chip 2.7 Mohm 1/10W | RM73B--275J |
| R737,738 | 247 0006 962 | Carbon chip 470 ohm 1/10W | RM73B--471J |
| R793~798 | 247 0018 905 | Carbon chip 0 ohm 1/10W | RM73B--0R0K |
| VR501 | 211 6093 941 | Semi fixed resistor 10 kohm | V06PB103 |
| VR502 | 211 6093 970 | Semi fixed resistor 100 kohm | V06PB104 |
| **CAPACITORS GROUP** | | | |
| C103 | 254 4260 977 | Electrolytic 4.7 µF/50V | CE04W1H4R7M |
| C104 | 254 4260 977 | Electrolytic 4.7 µF/50V | CE04W1H4R7M |
| C105,106 | 254 4260 980 | Electrolytic 10 µF/50V | CE04W1H100M |
| C107,108 | 257 0012 982 | Ceramic chip 0.022 µF/50V | CK73F1H223Z |
| C109~112 | 254 4260 980 | Electrolytic 10 µF/50V | CE04W1H100M |
| C114 | 257 0012 966 | Ceramic chip 0.01 µF/50V | CK73F1H103Z |
| C117,118 | 254 4260 980 | Electrolytic 10 µF/50V | CE04W1H100M |
| C121,122 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C123,124 | 257 0012 982 | Ceramic chip 0.022 µF/50V | CK73F1H223Z |
| C125,126 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |
| C127,128 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C131,132 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C134 | 257 0012 966 | Ceramic chip 0.01 µF/50V | CK73F1H103Z |
| C137,138 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C141,142 | 257 0004 961 | Ceramic chip 100 pF/50V | CC73SL1H101J |
| C143,144 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C145,146 | 257 0012 982 | Ceramic chip 0.022 µF/50V | CK73F1H223Z |
| C147,148 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |
| C149,150 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C153,154 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C156 | 257 0012 966 | Ceramic chip 0.01 µF/50V | CK73F1H103Z |
| C159,160 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C163,164 | 257 0004 961 | Ceramic chip 100 pF/50V | CC73SL1H101J |
| C401~404 | 254 4260 977 | Electrolytic 4.7 µF/50V | CE04W1H4R7M |

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| C407~409 | 254 4250 958 | Electrolytic 470 µF/6.3V | CE04W0J471M |
| C411 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C413 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C415 | 254 4252 930 | Electrolytic 100 µF/10V | CE04W1A101M |
| C416 | 253 1181 917 | Ceramic 0.022 µF/50V | CK45F1H223Z(DD-3) |
| C417 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |
| C501,502 | 257 0008 983 | Ceramic chip 1000 pF/50V | CK73B1H102K |
| C503~505 | 257 0010 900 | Ceramic chip 0.01 µF/50V | CK73B1H103K |
| C507,508 | 257 0010 900 | Ceramic chip 0.01 µF/50V | CK73B1H103K |
| C509 | 257 0002 947 | Ceramic chip 12 pF/50V | CC73SL1H120J |
| C510 | 257 0010 900 | Ceramic chip 0.01 µF/50V | CK73B1H103K |
| C511 | 254 4260 906 | Electrolytic 0.1 µF/50V | CE04W1H0R1M |
| C512 | 254 4254 938 | Electrolytic 47 µF/16V | CE04W1C470M |
| C513 | 254 3056 917 | Electrolytic 1 µF/50V | CE04D1H010MBP |
| C514 | 257 0010 942 | Ceramic chip 0.022 µF/50V | CK73B1H223K |
| C515 | 254 4254 938 | Electrolytic 47 µF/16V | CE04W1C470M |
| C516,517 | 257 0010 900 | Ceramic chip 0.01 µF/50V | CK73B1H103K |
| C520 | 257 0004 961 | Ceramic chip 100 pF/50V | CC73SL1H101J |
| C521~523 | 257 0010 900 | Ceramic chip 0.01 µF/50V | CK73B1H103K |
| C524 | 254 4260 935 | Electrolytic 0.47 µF/50V | CE04W1HR47M |
| C525 | 254 4260 980 | Electrolytic 10 µF/50V | CE04W1H100M |
| C526 | 257 0010 942 | Ceramic chip 0.022 µF/50V | CK73B1H223K |
| C527 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |
| C528 | 254 4254 938 | Electrolytic 47 µF/16V | CE04W1C470M |
| C529 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |
| C530 | 254 4260 919 | Electrolytic 0.22 µF/50V | CE04W1HR22M |
| C531 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |
| C532 | 257 0010 900 | Ceramic chip 0.01 µF/50V | CK73B1H103K |
| C533 | 256 1034 937 | Metallized 0.047 µF/50V | CF93A1H473J |
| C534 | 256 1034 940 | Metallized 0.056 µF/50V | CF93A1H563J |
| C535 | 254 3053 910 | Electrolytic 22 µF/16V | CE04D1C220MBP |
| C536 | 257 0004 961 | Ceramic chip 100 pF/50V | CC73SL1H101J |
| C538 | 254 4254 912 | Electrolytic 22 µF/16V | CE04W1C220M |
| C539,540 | 257 0006 972 | Ceramic chip 750 pF/50V | CC73SL1H751J |
| C541 | 254 4260 951 | Electrolytic 2.2 µF/50V | CE04W1H2R2M |
| C544 | 257 0010 900 | Ceramic chip 0.01 µF/50V | CK73B1H103K |
| C545,546 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C557,558 | 257 0002 976 | Ceramic chip 16 pF/50V | CC73SL1H160J |
| C559 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |
| C560 | 257 0010 900 | Ceramic chip 0.01 µF/50V | CK73B1H103K |
| C570 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C571 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |
| C574 | 257 0004 961 | Ceramic chip 100 pF/50V | CC73SL1H101J |
| C587 | 257 0014 935 | Ceramic chip 0.1 µF/25V | CK73F1E104Z |
| C703,704 | 254 4260 980 | Electrolytic 10 µF/50V | CE04W1H100M |
| C705,706 | 257 0004 961 | Ceramic chip 100 pF/50V | CC73SL1H101J |
| C709,710 | 254 4260 980 | Electrolytic 10 µF/50V | CE04W1H100M |
| C711,712 | 254 4260 977 | Electrolytic 4.7 µF/50V | CE04W1H4R7M |
| C751,752 | 257 0012 966 | Ceramic chip 0.01 µF/50V | CK73F1H103Z |
| C753,754 | 254 4260 977 | Electrolytic 4.7 µF/50V | CE04W1H4R7M |

| Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|---|---|---|---|---|
| **OTHER PARTS GROUP** | | | | |
| CF501 | 261 0135 907 | Ceramic filter MA8 | | 1 |
| CF502 | 261 0136 906 | Ceramic filter MS2G | | 1 |
| CF503 | 261 0079 005 | Ceramic resonator CSB456F11 | | 1 |
| CW072 | 205 0942 022 | 7P connector socket(TUC-P) | | 1 |
| CW083 | 205 0885 095 | 8P connector socket (TUC-P) | | 1 |
| CW101 | 205 0885 053 | 10P connector socket (TUC-P) | | 1 |
| CW121,122 | 205 0885 079 | 12P connector socket (TUC-P) | | 2 |
| CW142 | 205 0885 011 | 14P connector socket (TUC-P) | | 1 |
| CW152 | 205 0885 040 | 15P connector socket (TUC-P) | | 1 |
| CX931 | 205 0190 036 | 3P NH connector base | | 1 |
| FB501 | 235 0049 900 | Beads inductor | | 1 |
| JK401,402 | 204 8516 017 | 3P pin jack | | 2 |
| JK403 | 204 8512 008 | 1P pin jack | | 1 |
| JK501 | 205 0847 004 | 3P antenna terminal (PAL/F) | | 1 |
| JK502 | 204 8562 003 | 2P pin jack (S-GND) | | 1 |
| JK701 | 204 8513 010 | 6P pin jack (S-GND) | | 1 |
| L501 | 231 2096 001 | MW ant.-osc. coil | | 1 |
| L502 | 231 2085 009 | FM det. trans. | | 1 |
| L503 | 231 1138 009 | AM IFT | | 1 |
| L504 | 235 0060 905 | Inductor 2.2µH | | 1 |
| X501 | 261 0031 001 | Ceramic filter BFU450C4 | | 1 |
| X502 | 261 0116 007 | Ceramic filter SFU450B3 | | 1 |
| X503 | 399 0075 003 | Crystal 7.2 MHz | | 1 |
| | 001 0066 034 | Earth wire | for TUNER | 1 |
| | 203 0312 009 | AMISEN ass'y | for TUNER | 1 |

# PARTS LIST OF P.W.B. UNIT ASS'Y

## 1U-3065 CONTROL POWER UNIT ASS'Y

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| **SEMICONDUCTORS GROUP** | | | |
| IC113 | 262 2429 009 | IC TMP87CS71F-6631 | |
| TR102 | 269 0083 901 | Transistor DTA114EK | |
| TR103 | 269 0054 901 | Transistor DTC144EK | |
| TR104 | 274 0163 904 | Transistor 2SD601A | |
| TR105 | 269 0054 901 | Transistor DTC144EK | |
| TR106 | 271 0131 924 | Transistor 2SA988(E/F) | |
| TR112,113 | 269 0046 906 | Transistor DTA114ES(10K-10K) | |
| TR114 | 269 0054 901 | Transistor DTC144EK | |
| TR115 | 269 0055 900 | Transistor DTA144EK | |
| TR116,117 | 275 0094 908 | FET 2SK209-GR | |
| TR118 | 269 0055 900 | Transistor DTA144EK | |
| TR120 | 269 0020 906 | Transistor DTC114ES(10K-10K) | |
| TR201~205 | 269 0054 901 | Transistor DTC144EK | |
| TR501,502 | 273 0253 918 | Transistor 2SC2878(A/B) | |
| TR503~506 | 271 0094 919 | Transistor 2SA970(BL) | |
| TR509,510 | 273 0281 906 | Transistor 2SC2705(O)/(Y) | |
| TR521,522 | 273 0253 918 | Transistor 2SC2878(A/B) | |
| TR523~526 | 271 0094 919 | Transistor 2SA970(BL) | |
| TR529,530 | 273 0281 906 | Transistor 2SC2705(O)/(Y) | |
| TR541 | 273 0253 918 | Transistor 2SC2878(A/B) | |
| TR542,543 | 271 0094 919 | Transistor 2SA970(BL) | |
| TR545 | 273 0281 906 | Transistor 2SC2705(O)/(Y) | |
| TR603,604 | 271 0131 924 | Transistor 2SA988(E/F) | |
| TR605 | 273 0445 001 | Transistor 2SC4495 | |
| TR606 | 271 0131 924 | Transistor 2SA988(E/F) | |
| D102 | 276 0553 905 | Diode 1SR35-200A | |
| D103 | 276 0432 903 | Diode 1SS270A | |
| D105 | 276 0432 903 | Diode 1SS270A | |
| D106 | 276 0553 905 | Diode 1SR35-200A | |
| D125,126 | 276 0553 905 | Diode 1SR35-200A | |
| D128~131 | 276 0432 903 | Diode 1SS270A | |
| D601~611 | 276 0432 903 | Diode 1SS270A | |
| ZD100 | 276 0645 978 | Zener diode MTZJ36A | 36V |
| ZD102 | 276 0643 996 | Zener diode MTZJ5.6A | 5.6V |
| ZD103 | 276 0634 905 | Zener diode MTZJ3.3A | 3.3V |
| **RESISTORS GROUP** | | | |
| R158 | 247 0018 905 | Carbon chip 0 ohm 1/10W | RM73B--0R0K |
| R159~162 | 247 0009 901 | Carbon chip 4.7 kohm 1/10W | RM73B--472J |
| R171~173 | 247 0007 945 | Carbon chip 1 kohm 1/10W | RM73B--102J |
| R186~189 | 247 0009 985 | Carbon chip 10 kohm 1/10W | RM73B--103J |
| R190 | 247 0012 927 | Carbon chip 100 kohm 1/10W | RM73B--104J |
| R195 | 247 0018 905 | Carbon chip 0 ohm 1/10W | RM73B--0R0K |
| R198,199 | 247 0009 985 | Carbon chip 10 kohm 1/10W | RM73B--103J |
| R201 | 247 0009 985 | Carbon chip 10 kohm 1/10W | RM73B--103J |
| R202 | 247 0013 900 | Carbon chip 220 kohm 1/10W | RM73B--224J |
| R203 | 247 0009 985 | Carbon chip 10 kohm 1/10W | RM73B--103J |
| R204 | 247 0009 901 | Carbon chip 4.7 kohm 1/10W | RM73B--472J |
| R205 | 247 0009 985 | Carbon chip 10 kohm 1/10W | RM73B--103J |
| R206 | 247 0009 901 | Carbon chip 4.7 kohm 1/10W | RM73B--472J |
| R207~209 | 247 0007 945 | Carbon chip 1 kohm 1/10W | RM73B--102J |
| R210,212 | 241 2387 940 | Carbon film 4.7 ohm 1/4W(NB) | RD14B2E4R7JNBS |
| R224~226 | 244 2055 996 | Metal oxide 1.2 kohm 1W | S14B3A122JNBS(S) |
| R231 | 247 0011 944 | Carbon chip 47 kohm 1/10W | RM73B--473J |
| R529,530 | 241 2376 964 | Carbon film 47 ohm 1/4W(NB) | RD14B2E470JNBS |
| R609,610 | 241 2376 964 | Carbon film 47 ohm 1/4W(NB) | RD14B2E470JNBS |
| R674 | 241 2376 964 | Carbon film 47 ohm 1/4W(NB) | RD14B2E470JNBS |
| **CAPACITORS GROUP** | | | |
| C101 | 257 0012 966 | Ceramic chip 0.01 µF/50V | CK73F1H103Z |
| C142 | 257 0004 961 | Ceramic chip 100 pF/50V | CC73SL1H101J |
| C149 | 257 0008 983 | Ceramic chip 1000 pF/50V | CK73B1H102K |
| C158,159 | 257 0004 903 | Ceramic chip 56 pF/50V | CC73SL1H560J |
| C172 | 257 0014 935 | Ceramic chip 0.1 µF/25V | CK73F1E104Z |
| C173 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C174 | 254 4250 932 | Electrolytic 220 µF/6.3V | CE04W0J221M |
| C175 | 256 1034 982 | Metalized 0.12 µF/50V | CF93A1H124J |
| C176 | 254 4258 905 | Electrolytic 4.7 µF/35V | CE04W1V4R7M |
| C177 | 257 0012 966 | Ceramic chip 0.01 µF/50V | CK73F1H103Z |
| C178 | 259 0007 702 | Back up cap. 8200 µF/5.5V | SB CAP==822=C |
| C179 | 257 0012 966 | Ceramic chip 0.01 µF/50V | CK73F1H103Z |
| C181 | 257 0006 927 | Ceramic chip 470 pF/50V | CC73SL1H471J |
| C183~189 | 257 0008 983 | Ceramic chip 1000 pF/50V | CK73B1H102K |
| C191,192 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |
| C218,219 | 254 4260 977 | Electrolytic 4.7 µF/50V | CE04W1H4R7M |
| C220 | 254 4260 980 | Electrolytic 10 mF/50V | CE04W1H100M |
| C232,233 | 257 0008 983 | Ceramic chip 1000 pF/50V | CK73B1H102K |
| C236~238 | 257 0004 961 | Ceramic chip 100 pF/50V | CC73SL1H101J |
| C255,256 | 257 0008 983 | Ceramic chip 1000 pF/50V | CK73B1H102K |
| C259 | 257 0008 983 | Ceramic chip 1000 pF/50V | CK73B1H102K |
| C501,502 | 254 4260 980 | Electrolytic 10 µF/50V | CE04W1H100M |
| C503,504 | 253 4538 949 | Ceramic 100 pF/50V | CC45SL1H101J(DD-3) |
| C505,506 | 253 4537 924 | Ceramic 33 pF/50V | CC45SL1H330J(DD-3) |
| C507,508 | 253 4482 901 | Ceramic 33 pF/500V | CC45SL2H330J |
| C509,510 | 254 4254 938 | Electrolytic 47 µF/16V | CE04W1C470M |
| C511,512 | 255 4202 941 | Polypropylene film 1000 pF/50V | CQ93P1H102J |
| C513 | 254 4260 980 | Electrolytic 10 µF/50V | CE04W1H100M |
| C515,516 | 254 4260 993 | Electrolytic 22 µF/50V | CE04W1H220M |
| C531,532 | 254 4260 980 | Electrolytic 10 µF/50V | CE04W1H100M |

# PARTS LIST OF P.W.B. UNIT ASS'Y

## 1U-3066 POWER AMP UNIT ASS'Y

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| C533,534 | 253 4538 949 | Ceramic 100 pF/50V | CC45SL1H101J(DD-3) |
| C535,536 | 253 4537 924 | Ceramic 33 pF/50V | CC45SL1H330J(DD-3) |
| C537,538 | 253 4482 901 | Ceramic 33 pF/500V | CC45SL2H330J |
| C539,540 | 255 4202 941 | Polypropylene film 1000 pF/50V | CQ93P1H102J |
| C541,542 | 254 4260 993 | Electrolytic 22 µF/50V | CE04W1H220M |
| C555,556 | 254 4254 938 | Electrolytic 47 µF/16V | CE04W1C470M |
| C560 | 254 4260 980 | Electrolytic 10 µF/50V | CE04W1H100M |
| C561 | 253 4538 949 | Ceramic 100 pF/50V | CC45SL1H101J(DD-3) |
| C562 | 253 4537 924 | Ceramic 33 pF/50V | CC45SL1H330J(DD-3) |
| C563 | 253 4482 901 | Ceramic 33 pF/500V | CC45SL2H330J |
| C564 | 254 4254 938 | Electrolytic 47 µF/16V | CE04W1C470M |
| C565 | 255 4202 941 | Polypropylene film 1000 pF/50V | CQ93P1H102J |
| C566 | 254 4260 993 | Electrolytic 22 µF/50V | CE04W1H220M |
| C637 | 254 4260 980 | Electrolytic 10 µF/50V | CE04W1H100M |
| C638,639 | 253 1181 904 | Ceramic 0.01 µF/50V | CK45F1H103Z(DD-3) |

| OTHER PARTS GROUP | | | | Q'ty |
|---|---|---|---|---|
| CW051~055 | 205 0885 008 | 5P connector socket TUC-P | | 5 |
| CW111,112 | 205 0885 066 | 11P connector socket TUC-P | | 2 |
| CW143 | 205 0885 011 | 14P connector socket TUC-P | | 1 |
| CW153,154 | 205 0885 040 | 15P connector socket TUC-P | | 2 |
| CW161 | 205 1056 027 | 16P connector socket TKC-V | | 1 |
| CX071,072 | 205 0943 021 | 7P connector base (TUC-P) | | 2 |
| CX081 | 205 0343 087 | 8P connector base(KR-PH) | | 1 |
| CX083 | 205 0884 096 | 8P connector base (TUC-P) | | 1 |
| CX101 | 205 0884 054 | 10P connector base (TUC-P) | | 1 |
| CX113,114 | 205 0884 067 | 11P connector base (TUC-P) | | 2 |
| CX121,122 | 205 0884 070 | 12P connector base (TUC-P) | | 2 |
| CX141~143 | 205 0884 012 | 14P connector base (TUC-P) | | 3 |
| CX151,152 | 205 0884 041 | 15P connector base (TUC-P) | | 2 |
| FB101~103 | 235 0049 900 | Beads inductor | | 4 |
| FB120,121 | 235 0049 900 | Beads inductor | | 4 |
| FB122,123 | 235 0106 908 | Chip emifil (21A05) | | 2 |
| FB126 | 235 0106 908 | Chip emifil (21A05) | | 3 |
| FB127 | 235 0049 900 | Beads inductor | | 2 |
| FB129 | 235 0106 908 | Chip emifil (21A05) | | 3 |
| FB202 | 235 0106 908 | Chip emifil (21A05) | | 3 |
| X103 | 399 0191 903 | Ceramic 4.00 MHz | CST4.00MGW-TF01 | 1 |
| | 205 1034 010 | M3 Screw terminal | | 3 |

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| **SEMICONDUCTORS GROUP** | | | |
| IC501 | 268 0073 905 | IC ICP-N15 | IC protector |
| IC502 | 263 0793 002 | IC NJM7806FA(S) | |
| IC503 | 263 0801 004 | IC NJM7812FA(S) | |
| IC504 | 263 0641 002 | IC NJM7912FA | |
| IC505 | 263 0793 002 | IC NJM7806FA(S) | |
| TR507,508 | 273 0303 910 | Transistor 2SC1740S(S) | |
| TR511,512 | 274 0151 929 | Transistor 2SD2004(Q) | |
| TR513,514 | 272 0107 922 | Transistor 2SB1328(Q) | |
| TR519,520 | 273 0235 923 | Transistor 2SC1841(E/F) | |
| TR527,528 | 273 0303 910 | Transistor 2SC1740S(S) | |
| TR531,532 | 274 0151 929 | Transistor 2SD2004(Q) | |
| TR533,534 | 272 0107 922 | Transistor 2SB1328(Q) | |
| TR539,540 | 273 0235 923 | Transistor 2SC1841(E/F) | |
| TR544 | 273 0303 910 | Transistor 2SC1740S(S) | |
| TR546 | 274 0151 929 | Transistor 2SD2004(Q) | |
| TR547 | 272 0107 922 | Transistor 2SB1328(Q) | |
| TR550 | 273 0235 923 | Transistor 2SC1841(E/F) | |
| TR551 | 271 0131 924 | Transistor 2SA988(E/F) | |
| TR552 | 273 0429 904 | Transistor 2SC3311A | |
| TR554 | 273 0429 904 | Transistor 2SC3311A | |
| TR555 | 271 0192 905 | Transistor 2SA933S(S) | |
| TR556,557 | 273 0429 904 | Transistor 2SC3311A | |
| TR558 | 271 0192 905 | Transistor 2SA933S(S) | |
| TR559~565 | 273 0429 904 | Transistor 2SC3311A | |
| TR566 | 271 0254 018 | Transistor 2SA1725(O/P/Y) | |
| TR567,568 | 273 0253 918 | Transistor 2SC2878(A/B) | |
| D501~505 | 276 0432 903 | Diode 1SS270A | |
| D507~512 | 276 0553 905 | Diode 1SR35-200A | |
| D513~517 | 276 0432 903 | Diode 1SS270A | |
| D518~520 | 276 0305 001 | Diode S4VB20 | |
| D521~523 | 276 0432 903 | Diode 1SS270A | |
| ZD501 | 276 0644 911 | Zener diode MTZJ7.5A | 7.5V |
| **RESISTORS GROUP** | | | |
| R526~528 | 244 2052 957 | Metal oxide 5.6 kohm 1W | S14B3A562JNBS(S) |
| R537,538 | 241 2378 962 | Carbon film 330 ohm 1/4W(NB) | RD14B2E331JNBS |
| R539~542 | 241 2387 908 | Carbon film 1 ohm 1/4W(NB) | RD14B2E010JNBS |
| R543~550 | 244 2043 982 | Metal oxide 0.22 ohm 1W | S14B3AR22JNBS(S) |
| R557~571 | 244 2043 937 | Metal oxide 10 ohm 1W | S14B3A100JNBS(S) |
| R605~608 | 244 2052 957 | Metal oxide 5.6 kohm 1W | S14B3A562JNBS(S) |
| R619,620 | 241 2378 962 | Carbon film 330 ohm 1/4W(NB) | RD14B2E331JNBS |
| R621-624 | 241 2387 908 | Carbon film 1 ohm 1/4W(NB) | RD14B2E010JNBS |
| R625~632 | 244 2043 982 | Metal oxide 0.22 ohm 1W | S14B3AR22JNBS(S) |
| R639,640 | 244 2043 937 | Metal oxide 10 ohm 1W | S14B3A100JNBS(S) |
| R672,673 | 244 2052 957 | Metal oxide 5.6 kohm 1W | S14B3A562JNBS(S) |
| R679 | 241 2378 962 | Carbon film 330 ohm 1/4W(NB) | RD14B2E331JNBS |
| R680,681 | 241 2387 908 | Carbon film 1 ohm 1/4W(NB) | RD14B2E010JNBS |

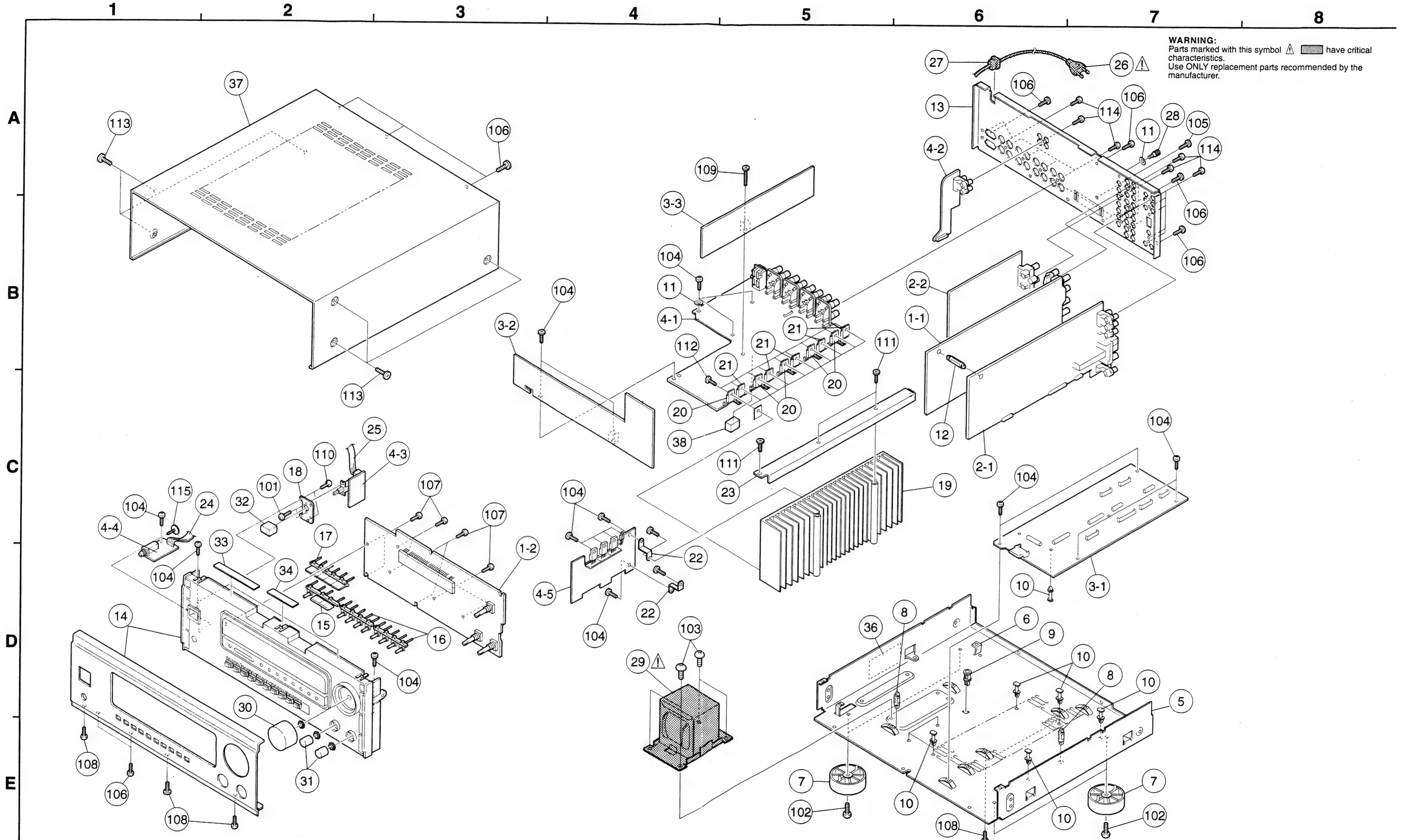
| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| R682~685 | 244 2043 982 | Metal oxide 0.22 ohm 1W | S14B3AR22JNBS(S) |
| R690 | 244 2043 937 | Metal oxide 10 ohm 1W | S14B3A100JNBS(S) |
| R714,715 | 243 2039 032 | Winding 0.1 ohm 5W | RW99=3H0R1K |
| R734 | 242 2009 001 | Composition 2.2 Mohm 1/2W | RC05GF2H225K(UL) |
| R744 | 241 2376 919 | Carbon film 30 ohm 1/4W(NB) | RD14B2E300JNBS |
| R751,752 | 244 2052 960 | Metal oxide 220 ohm 1W | S14B3A221JNBS(S) |
| R757,758 | 244 2052 960 | Metal oxide 220 ohm 1W | S14B3A221JNBS(S) |
| R761 | 241 2375 978 | Carbon film 20 ohm 1/4W(NB) | RD14B2E200JNBS |
| VR501~505 | 211 6093 912 | Semi fixed resistor 4.7 kohm | V06PB472 |
| **CAPACITORS GROUP** | | | |
| C513,514 | 254 4261 918 | Electrolytic 47 µF/50V | CE04W1H470M |
| C515,516 | 254 4263 987 | Electrolytic 10 µF/100V | CE04W2A100M |
| C517-520 | 253 4494 902 | Ceramic 100 pF/500V | CC45SL2H101J |
| C521,522 | 256 1034 979 | Metalized 0.1 µF/50V | CF93A1H104J |
| C541,542 | 254 4261 918 | Electrolytic 47 µF/50V | CE04W1H470M |
| C543,544 | 253 4494 902 | Ceramic 100 pF/500V | CC45SL2H101J |
| C545,546 | 254 4263 987 | Electrolytic 10 µF/100V | CE04W2A100M |
| C547,548 | 253 4494 902 | Ceramic 100 pF/500V | CC45SL2H101J |
| C549,550 | 256 1034 979 | Metalized 0.1 µF/50V | CF93A1H104J |
| C566 | 254 4261 918 | Electrolytic 47 µF/50V | CE04W1H470M |
| C567 | 254 4263 987 | Electrolytic 10 µF/100V | CE04W2A100M |
| C568,569 | 253 4494 902 | Ceramic 100 pF/500V | CC45SL2H101J |
| C570 | 256 1034 979 | Metalized 0.1 µF/50V | CF93A1H104J |
| C573 | 253 1181 904 | Ceramic 0.01 µF/50V | CK45F1H103Z(DD-3 |
| C581 | 254 4254 938 | Electrolytic 47 µF/16V | CE04W1C470M |
| C582 | 253 9039 906 | BC ceramic cap. 0.1 µF/25V | CK45=1E104Z(DD-3 |
| C583 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C584 | 253 9039 906 | BC ceramic cap. 0.1 µF/25V | CK45=1E104Z(DD-3 |
| C585 | 254 4250 945 | Electrolytic 330 µF/6.3V | CE04W0J331M |
| C586 | 253 9039 906 | BC ceramic cap. 0.1 µF/25V | CK45=1E104Z(DD-3 |
| C587 | 254 4250 945 | Electrolytic 330 µF/6.3V | CE04W0J331M |
| C588 | 253 1181 904 | Ceramic 0.01 µF/50V | CK45F1H103Z(DD-3 |
| C589 | 254 4254 909 | Electrolytic 10 µF/16V | CE04W1C100M |
| C590 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |
| C591~593 | 253 1181 904 | Ceramic 0.01 µF/50V | CK45F1H103Z(DD-3 |
| C594 | 254 4256 790 | Electrolytic 2200 µF/25V | CE04W1E222MC |
| C595 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |
| C599 | 256 1034 979 | Metalized 0.1 µF/50V | CF93A1H104J |
| C601 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |
| C602 | 254 6200 003 | Electrolytic 10000 µF/56V | E68W==103MC(DL) |
| C603,604 | 256 1042 903 | Metalized 0.1 µF/250V | CF93A2E104K |
| C605 | 254 6200 003 | Electrolytic 10000 µF/56V | E68W==103MC(DL) |
| C606-608 | 256 1042 903 | Metalized 0.1 µF/250V | CF93A2E104K |
| C609-612 | 255 1265 936 | Mylar film 0.01 µF/50V | CQ93M1H103JB) |
| C615 | 253 1181 904 | Ceramic 0.01 µF/50V | CK45F1H103Z(DD-3 |
| C617 | 254 4254 912 | Electrolytic 22 µF/16V | CE04W1C220M |
| C618 | 253 1179 903 | Ceramic 100 pF/50V | CK45B1H101K(DD-3) |
| C619 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |

| Ref. No. | Part No. | Part Name | Remarks |
|---|---|---|---|
| C620 | 253 1181 904 | Ceramic 0.01 µF/50V | CK45F1H103Z(DD-3) |
| C621~624 | 254 4254 938 | Electrolytic 47 µF/16V | CE04W1C470M |
| C629~632 | 255 1265 936 | Mylar film 0.01 µF/50V | CQ93M1H103J(B) |
| C633,634 | 253 1180 921 | Ceramic 1000 pF/50V | CK45B1H102K(DD-3) |
| C635 | 254 4258 947 | Electrolytic 47 µF/35V | CE04W1V470M |
| C636~638 | 253 1181 904 | Ceramic 0.01 µF/50V | CK45F1H103Z(DD-3) |
| C639,640 | 254 4258 947 | Electrolytic 47 µF/35V | CE04W1V470M |
| C641 | 253 1181 904 | Ceramic 0.01 µF/50V | CK45F1H103Z(DD-3) |
| C642 | 254 4257 702 | Electrolytic 3300 µF/25V | CE04W1E332MC |
| C643 | 254 4256 787 | Electrolytic 1000 µF/25V | CE04W1E102MC |
| C644,645 | 256 1034 979 | Metalized 0.1 µF/50V | CF93A1H104J |
| C646 | 254 4262 784 | Electrolytic 470µF/63 V | CE04W1J471MC |
| C647,648 | 253 8014 702 | Ceramic 0.01 F/400V(AC) | CK45F2GAC103MC |
| C649 | 255 1265 936 | Mylar film 0.01 µF/50V | CQ93M1H103J(B) |
| C660 | 254 4260 948 | Electrolytic 1 µF/50V | CE04W1H010M |
| C662 | 255 1265 936 | Mylar film 0.01 µF/50V | CQ93M1H103J(B) |
| **OTHER PARTS GROUP** | | | **Q'ty** |
| ⚠ AC501 | 203 3976 002 | AC outlet (2P) | 1 |
| CW091 | 205 0885 037 | 9P connector socket (TUC-P) | 1 |
| CW113 | 205 0885 066 | 11P connector socket (TUC-P) | 1 |
| CX021 | 205 0581 001 | 2P VH connector base | 1 |
| CX022,024 | 205 0606 025 | 2P wrapping terminal | 2 |
| CX031 | 205 0233 032 | 3 P EH connector base | 1 |
| CX033 | 205 0343 032 | 3P connector base (KR-PH) | 1 |
| CX051~055 | 205 0884 009 | 5P connector base TUC-P | 5 |
| CX061~069 | 205 1064 064 | 6P pin header (TXX)V | 9 |
| CX091 | 205 0884 038 | 9P connector base TUC-P | 1 |
| CX111,112 | 205 0884 067 | 11P connector base TUC-P | 2 |
| CX153,154 | 205 0884 041 | 15P connector base TUC-P | 2 |
| CX963 | 205 1064 064 | 6P pin header (TXX)V | 1 |
| CY021 | 205 0581 001 | 2P VH connector base | 1 |
| CY032 | 205 0087 039 | 3 P wrapping terminal | 1 |
| CY033 | 205 0343 032 | 3P connector base (KR-PH) | 1 |
| ⚠ F001 | 206 1046 001 | Fuse 6.3A UL 20mm | 1 |
| ⚠ F008 | 206 1046 014 | Fuse 8A | 1 |
| ⚠ F011,012 | 206 1039 063 | Fuse 2.0A | 2 |
| FB502 | 235 0049 900 | Beads inductor | 1 |
| JK501 | 204 8545 004 | 4P pin jack (GND) | |

| Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|---|---|---|---|---|
| JK502 | 204 8264 013 | Head phone jack (NI) | | 1 |
| L501~505 | 235 0068 004 | Inductor 1µH | | 5 |
| RL501 | 214 0127 003 | Relay (RY-12W) | | 1 |
| RL502~504 | 214 0194 007 | Relay (VB12SMBU) | | 3 |
| RL505 | 214 0188 000 | Relay VS-12MBNR-SM2(TV-8) | | 1 |
| ⚠ S501 | 212 1031 008 | Power switch (TV-5) | | 1 |
| SC501 | 279 0016 904 | Thyristor SF0R1A42 | | 1 |
| ⚠ T501 | 233 6073 000 | Power trans. (Mini)-EU | | 1 |
| TH501 | 279 0034 067 | Posistor PTH9M04BB222TS2F333 | | 1 |
| TM501,502 | 205 0472 013 | 8P SP terminal (EAEK) | | 2 |
| TP501~505 | 205 0190 036 | 3P NH connector base | | 5 |
| TP510 | 205 0343 029 | 2P connector base (KR-PH) | | 1 |
| | 202 0040 909 | Fuse clip | | 8 |
| | 415 0309 026 | P.V.C. tube (L=20) | for TH501 | 2 |

# EXPLODED VIEW OF CHASSIS AND CABINET

**WARNING:**
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

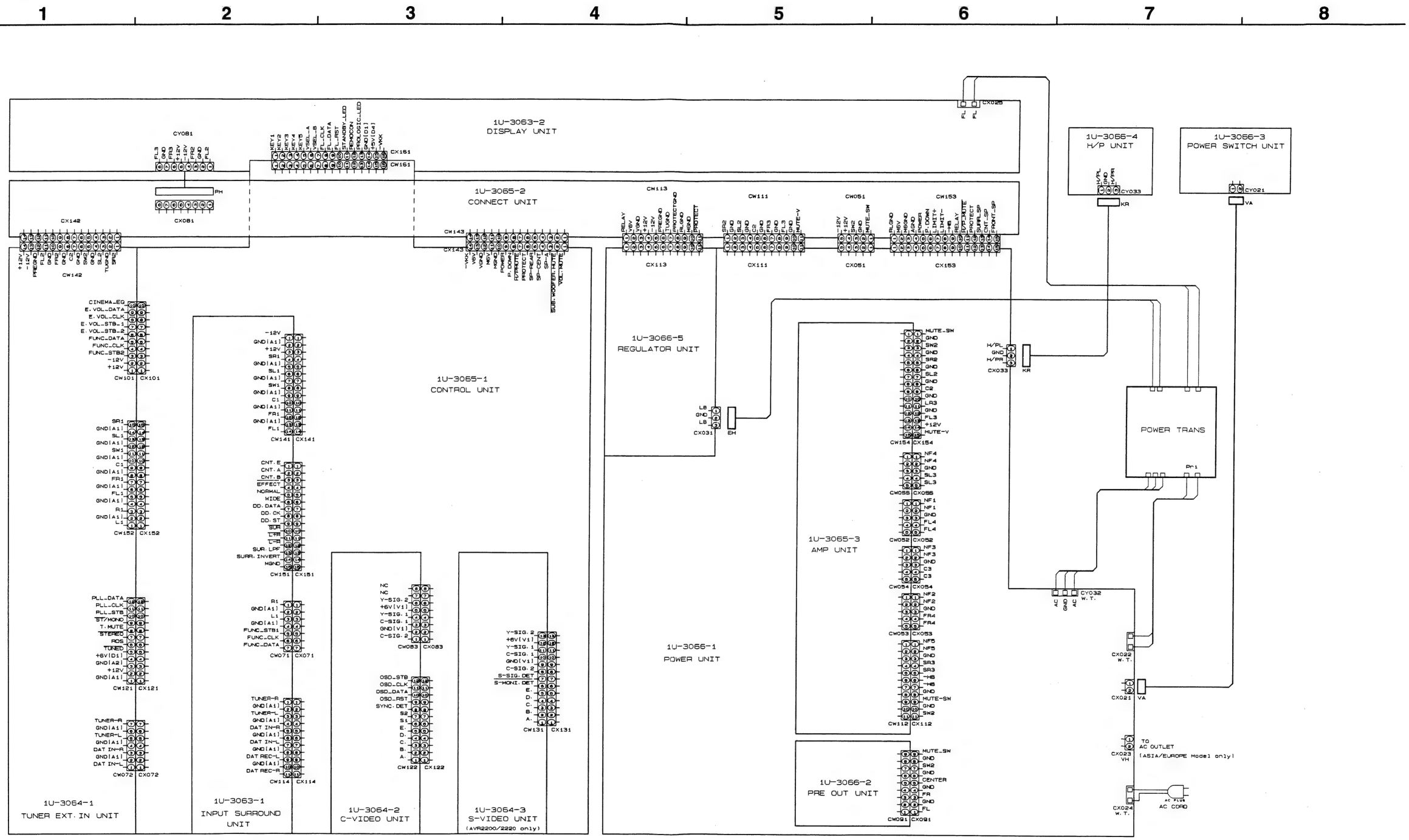


## PARTS LIST OF EXPLODED VIEW

| Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|---|---|---|---|---|
| 1 | 1U- 3063 | Audio in Disp. P.W.B. unit ass'y | | 1 |
| 1-1 | 1U- 3063 -1 | Input surroud unit | | |
| 1-2 | 1U- 3063 -2 | Display unit | | |
| 2 | 1U- 3064 | TU VR video P.W.B. unit ass'y | | 1 |
| 2-1 | 1U- 3064 -1 | Tuner Ext. in unit | | |
| 2-2 | 1U- 3064 -2 | C-video unit | | |
| 3 | 1U- 3065 | Control power P.W.B. unit ass'y | | 1 |
| 3-1 | 1U- 3065 -1 | Control unit | | |
| 3-2 | 1U- 3065 -2 | Connect unit | | |
| 3-3 | 1U- 3065 -3 | AMP UNIT | | |
| 4 | 1U- 3066 | Power amp. P.W.B. unit ass'y | | 1 |
| 4-1 | 1U- 3066 -1 | Power unit | | |
| 4-2 | 1U- 3066 -2 | Pre out unit | | |
| 4-3 | 1U- 3066 -3 | Power switch unit | | |
| 4-4 | 1U- 3066 -4 | Head phone unit | | |
| 4-5 | 1U- 3066 -5 | Regulator unit | | |
| 5 | 411 1372 209 | Main chassis | | 1 |
| 6 | 412 4210 002 | Bracket | | 1 |
| 7 | 104 0194 205 | Foot ass'y | | 4 |
| 8 | 449 0133 017 | P.W.B. holder | | 2 |
| 9 | 412 3548 005 | P.W.B. catcher | | 1 |
| 10 | 412 2814 028 | Card spacer (L=10) | | 8 |
| 11 | 477 0018 001 | Washer (P-87) | | 2 |
| 12 | 449 0133 004 | P.W.B. holder | | 1 |
| 13 | 105 1260 209 | Back panel | | 1 |
| 14 | 146 2041 101 | Inner panel ass'y | | 1 |
| 15 | 113 1804 006 | Tuning knob | | 1 |
| 16 | 113 1805 005 | Function knob | | 2 |
| 17 | 113 1823 100 | Tuning-2 knob | | 1 |
| 18 | 412 4163 007 | Switch bracket | | 1 |
| 19 | 417 0553 001 | Power radiator | | 1 |
| 20 | 273 0389 031 | Transistor 2SC3855 LB(O/P/Y)(Z) | | 5 |
| 21 | 271 0240 035 | Transistor 2SA1491 LB(O/P/Y)(Z) | | 5 |
| 22 | 412 4127 001 | P.W.B. bracket (B) | | 2 |
| 23 | 412 4296 000 | Radiator bracket | | 1 |
| 24 | 203 4871 067 | 3P KR-KR ribbon 175 | CN033 | 1 |
| 25 | 203 2374 029 | 2P VA-VA cord | CN021 | 1 |
| ⚠ 26 | 206 2060 002 | AC cord (polarized) | | 1 |
| ⚠ 27 | 445 0056 008 | Cord bush | | 1 |
| 28 | 205 0071 016 | Terminal ass'y | | 1 |
| ⚠ 29 | 233 6232 003 | Power trans. (E3) | | 1 |
| 30 | 112 0744 067 | VR. knob ass'y | | 1 |
| 31 | 112 0685 100 | Knob (MARU) | | 2 |
| 32 | 113 9213 000 | P·knob (P) ass'y | | 1 |
| 33 | 461 0976 009 | Rubber sheet | | 2 |
| 34 | 461 0976 012 | Rubber sheet | | 1 |
| 35 | 445 8004 007 | Wire clamper | | 3 |
| 36 | 513 2706 028 | Caution label | | 1 |
| 37 | 102 0583 030 | Top cover | | 1 |
| 38 | 461 0539 048 | Rubber sheet | | 1 |

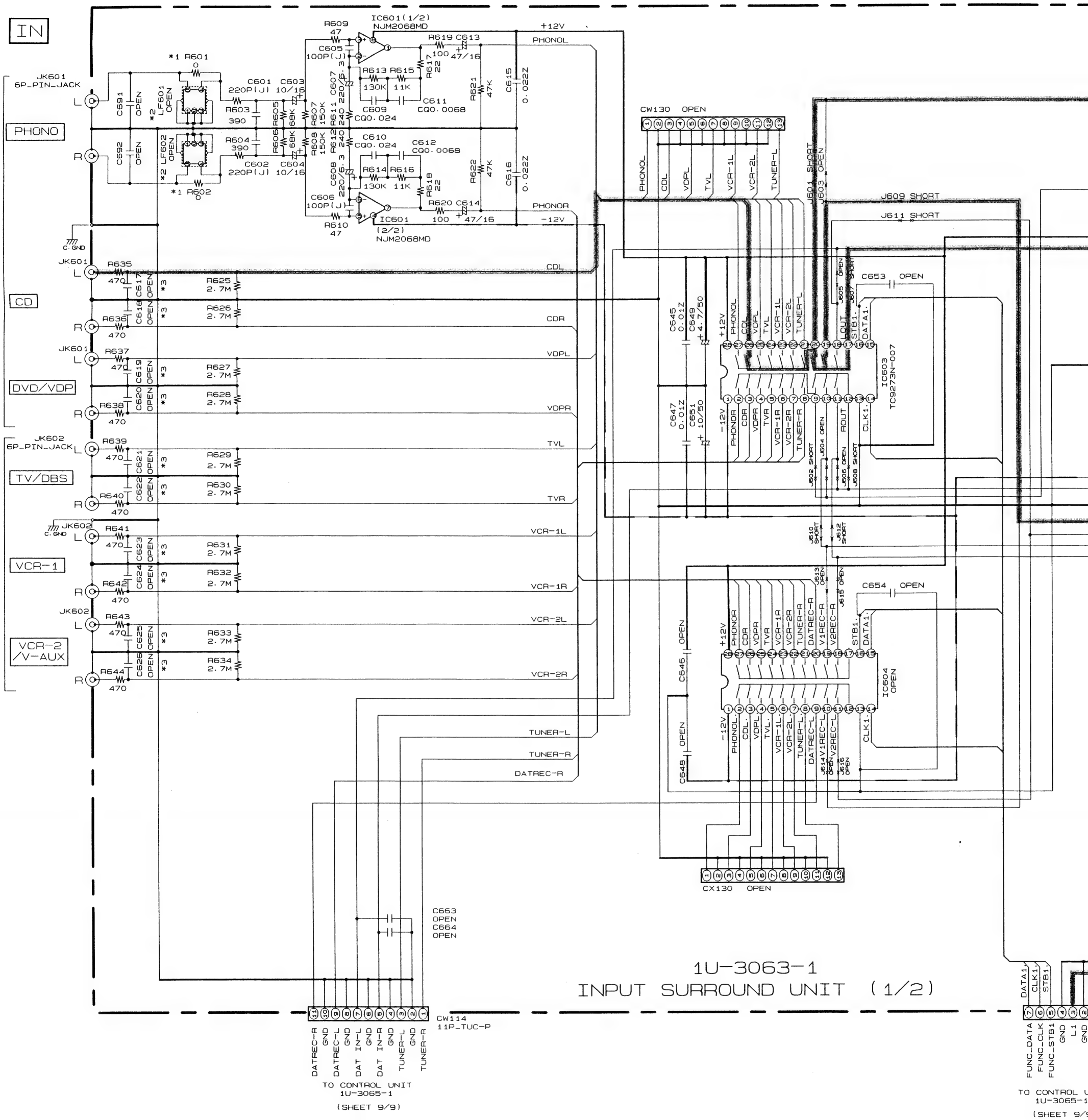
| Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|---|---|---|---|---|
| **SCREWS** | | | | |
| 101 | 471 3303 016 | Screw 3X6 CBS-Z | | 2 |
| 102 | 473 7002 018 | Screw 3X8 CBTS(S)-Z | | 4 |
| 103 | 473 7004 016 | Screw 4X6 CBTS (S)-Z | | 4 |
| 104 | 473 7005 002 | Screw 3X10 CBTS(S)-Z | | 18 |
| 105 | 473 7006 043 | Screw 3X14 CBTS (S)-B | | 1 |
| 106 | 473 7015 018 | Screw 3X8 CBTS(S)-B | | 10 |
| 107 | 473 7500 015 | Screw 3X8 CBTS(P)-Z | | 8 |
| 108 | 473 7501 001 | Screw 3X10 CBTS (P)-Z | | 5 |
| 109 | 473 7501 030 | Screw 3X20 CBTS (P)-Z | | 1 |
| 110 | 473 7505 007 | Screw 2.6X8 CBTS(P)-Z | | 2 |
| 111 | 473 7508 017 | Screw 3X10 CBTS(P)-B | | 3 |
| 112 | 473 8007 009 | Cup screw 3X12 | | 10 |
| 113 | 473 8064 000 | Screw 4X8 CBTS(B)-B-3P | | 6 |
| 114 | 477 0064 107 | Fixing screw | | 18 |
| 115 | 477 0262 006 | Special screw | | 1 |
| **PACKING & ACCESORIES (Not included EXPLODED VIEW)** | | | | |
| 151 | 504 9102 029 | Stylen paper | | 1 |
| 152 | 505 9102 019 | Poly. cover | | 1 |
| 153 | 503 1236 107 | Cushion | | 1 |
| 154 | 505 8006 019 | Envelope | | 1 |
| 155 | 511 3182 001 | Instruction manual | | 1 |
| 156 | 231 0922 009 | Loop antenna | | 1 |
| 157 | 395 0023 008 | FM ant. ass'y | | 1 |
| 158 | 399 0458 002 | Remote controller RC-832 | | 1 |
| 159 | 515 0671 504 | Service station list (EX) | | 1 |
| 160 | 529 0079 008 | FM ant. adapter | | 1 |
| 161 | 501 1988 006 | Carton case | | 1 |
| 162 | 513 1389 006 | Control card base | | 1 |
| 163 | 513 1349 004 | Thermal carbon film | | 1 |
| 164 | 515 0690 103 | DEL warranty home | | 1 |
| 165 | 517 1318 037 | UPC label | | 1 |

# WIRING DIAGRAM



## SCHEMATIC DIAGRAM (1/9)

1 2 3 4 5 6




# 1U-3063-1
# INPUT SURROUND UNIT (1/2)

| | *1 R601, 602 | *2 LF601, 602 | *3 C617~626 |
|---|---|---|---|
| * USA TAIWAN R.O.C. | 0 | — | — |
| ASIA | 1.3K | L.P.F. | 330P |
| EUROPE | 1.3K | L.P.F. | 330P |
| JAPAN | 0 | — | — |

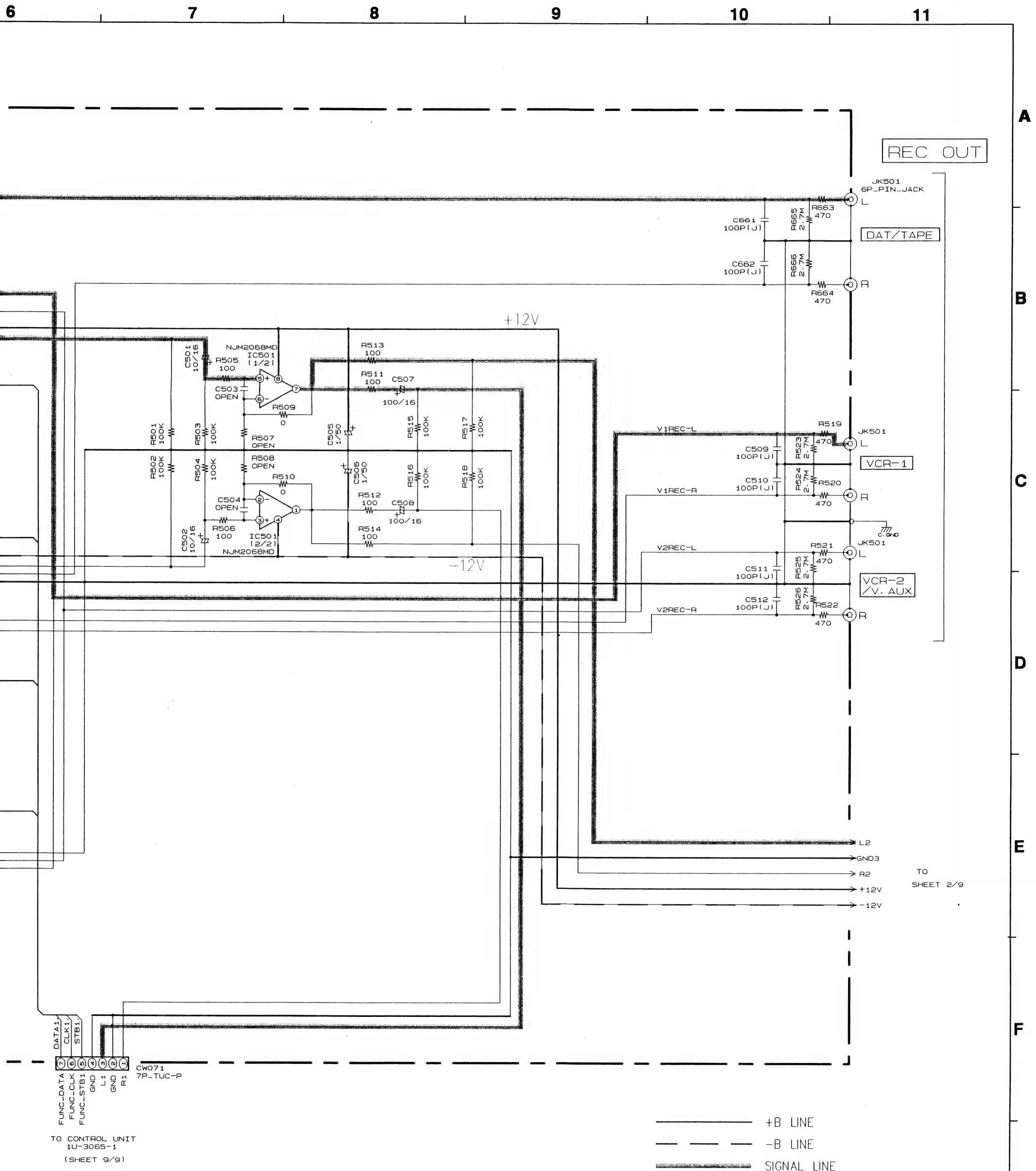
**NOTICE**

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM

ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD

EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.

CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.




1,000,000 OHM
RO-MICRO FARAD
O SIGNAL INPUT

OUT PRIOR

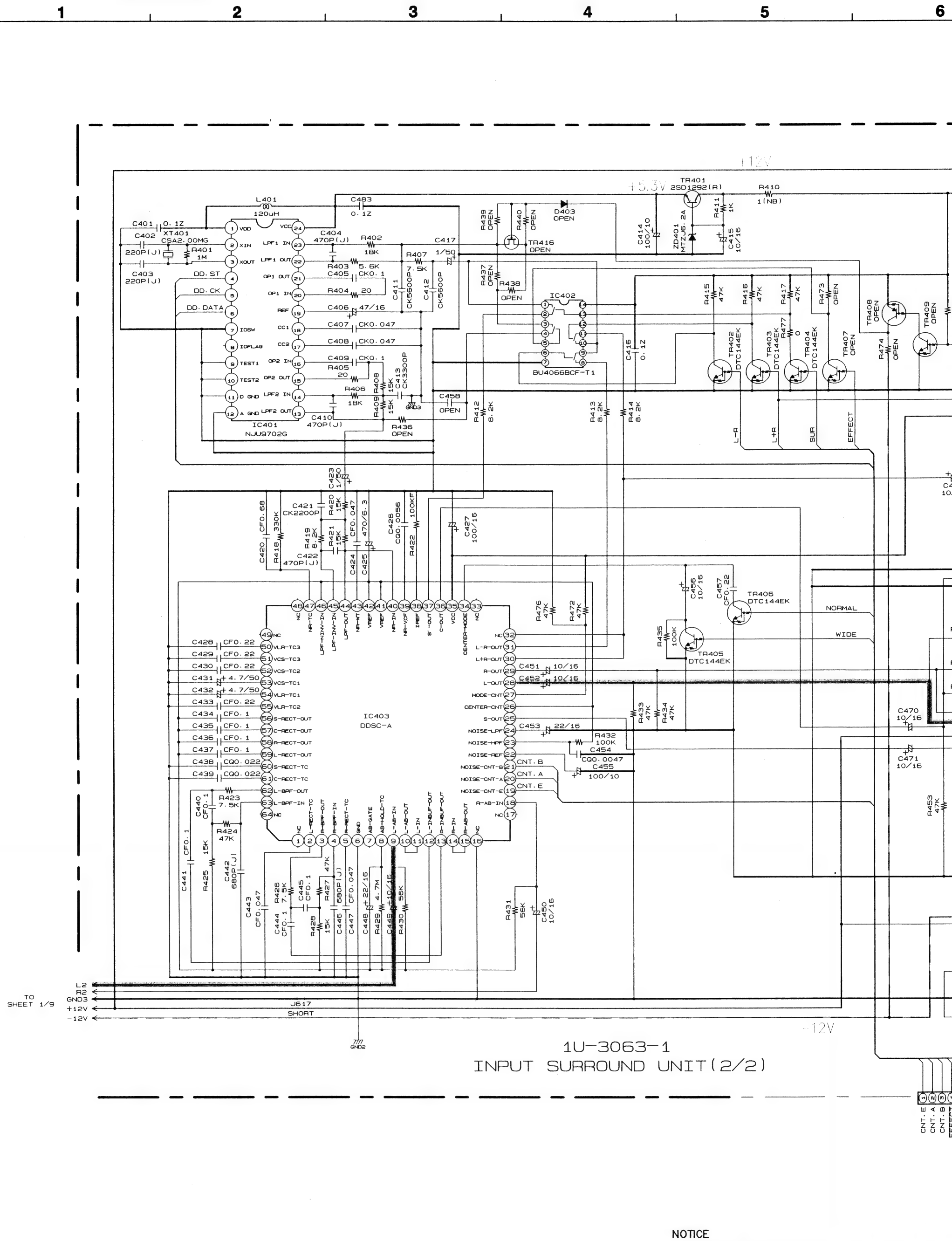
**WARNING:**
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

**CAUTION:**
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is detective.

**WARNING:**
DO NOT return the unit to the customer unit the problem is located and corrected.

## SCHEMATIC DIAGRAM (1/9)

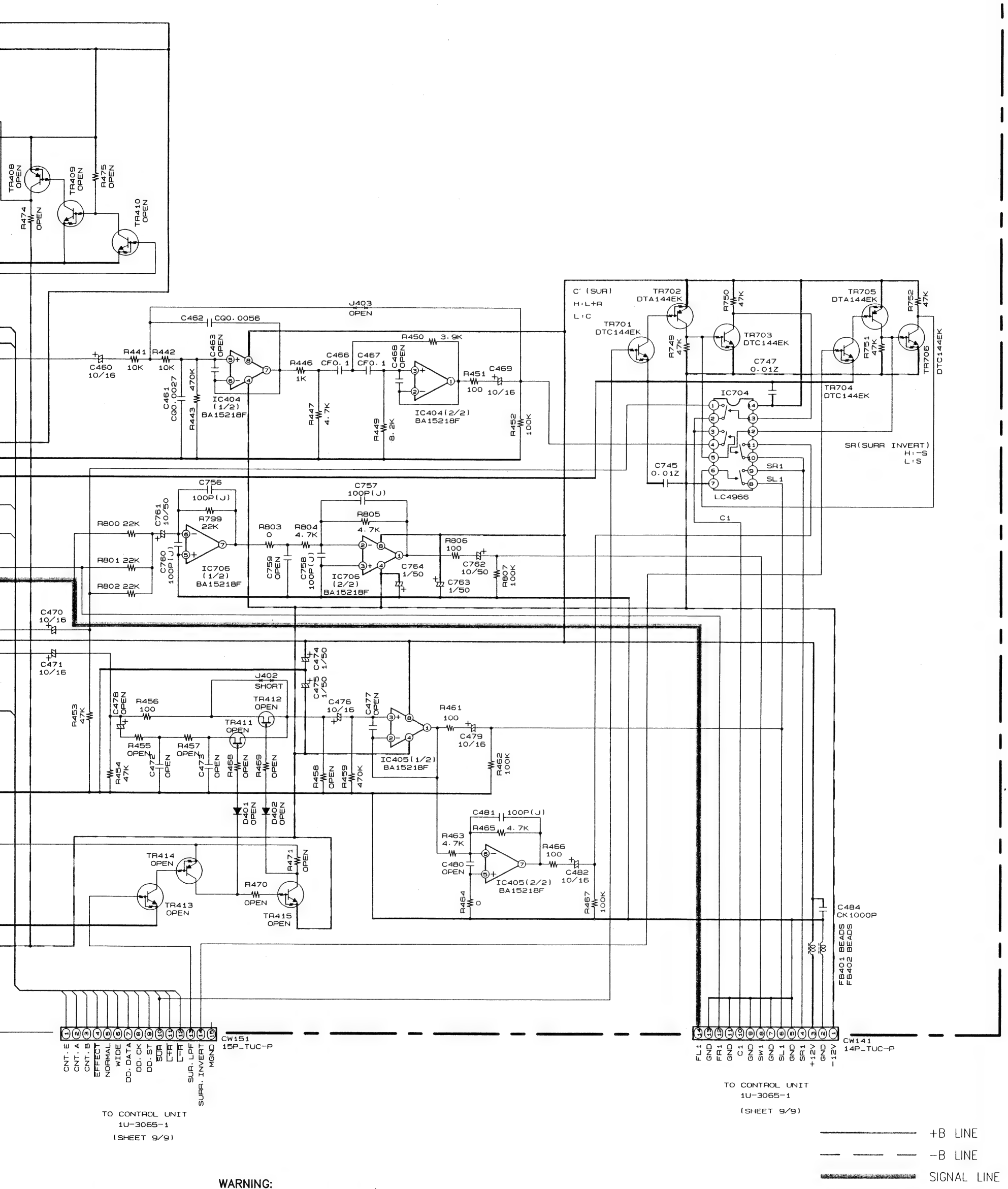
## SCHEMATIC DIAGRAM (2/9)




1U-3063-1
INPUT SURROUND UNIT(2/2)

### NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 O
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO F
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL IN CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.




OHM M=1,000,000 OHM
D. P=MICRO-MICRO FARAD
RED AT NO SIGNAL INPUT

NGE WITHOUT PRIOR

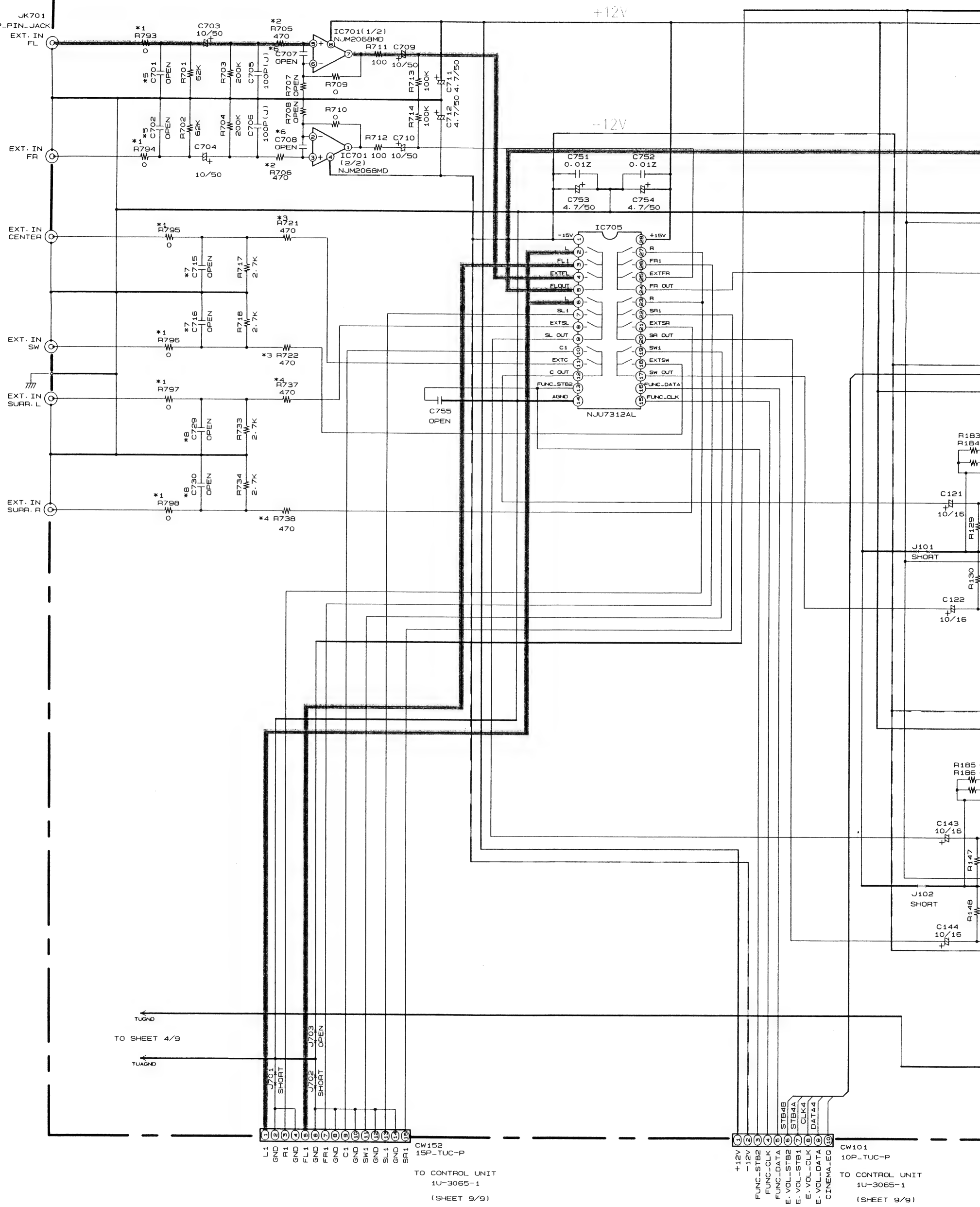
**WARNING:**
Parts marked with this symbol ⚠ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

**CAUTION:**
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is detective.

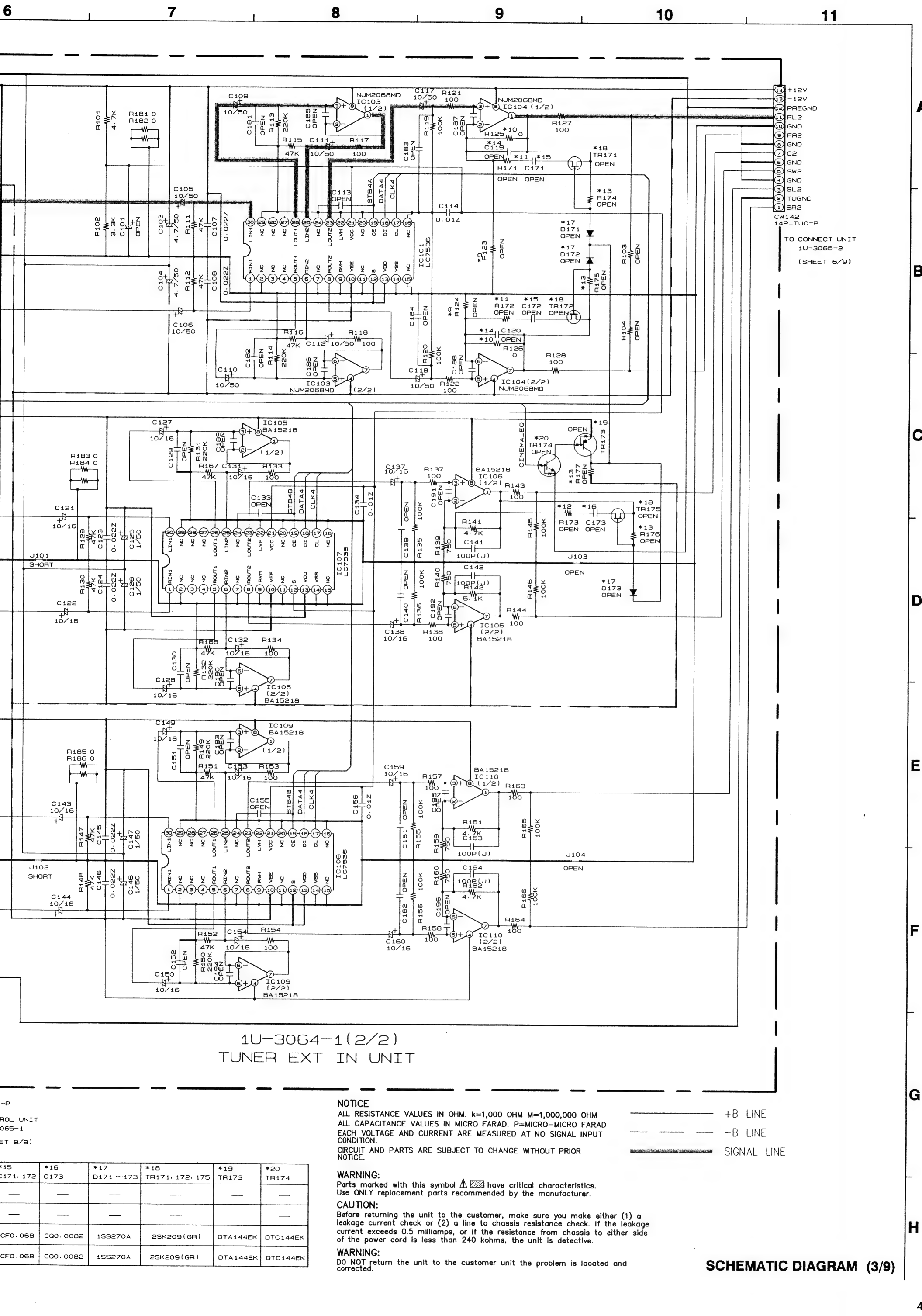
**WARNING:**
DO NOT return the unit to the customer unit the problem is located and corrected.

## SCHEMATIC DIAGRAM (2/9)

## SCHEMATIC DIAGRAM (3/9)




| | *1 R793~798 | *2 R705, 706 | *3 R721, 722 | *4 R737, 738 | *5 C701, 702 | *6 C707, 708 | *7 C715, 716 | *8 C729, 730 | *9 R123, 124 | *10 R125, 126 | *11 R171, 172 | *12 R173 | *13 R174~177 | *14 C119, 120 | *15 C171, 172 | *16 C173 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| * USA TAIWAN R.O.C. | 0 | 470 | 470 | 470 | — | — | — | — | — | 0 | — | — | — | — | — | — |
| ASIA(AVR1400) EUROPE | 470 | 100 | 100 | 100 | 330P | 100P | 330P | 330P | — | 0 | — | — | — | — | — | — |
| JAPAN | 0 | 470 | 470 | 470 | — | — | — | — | 1K | 1K | 330 | 6.8K | 47K | 100P(J) | CF0.068 | CQ0.0082 |
| ASIA(AVR2200) | 470 | 100 | 100 | 100 | 330P | 100P | 330P | 330P | 1K | 1K | 330 | 6.8K | 47K | 100P(J) | CF0.068 | CQ0.0082 |




-P

ROL UNIT
065-1
ET 9/9)

| *15 C171. 172 | *16 C173 | *17 D171 ~173 | *18 TR171. 172. 175 | *19 TR173 | *20 TR174 |
|---|---|---|---|---|---|
| — | — | — | — | — | — |
| — | — | — | — | — | — |
| CF0.068 | CQ0.0082 | 1SS270A | 2SK209(GR) | DTA144EK | DTC144EK |
| CF0.068 | CQ0.0082 | 1SS270A | 2SK209(GR) | DTA144EK | DTC144EK |

**NOTICE**

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

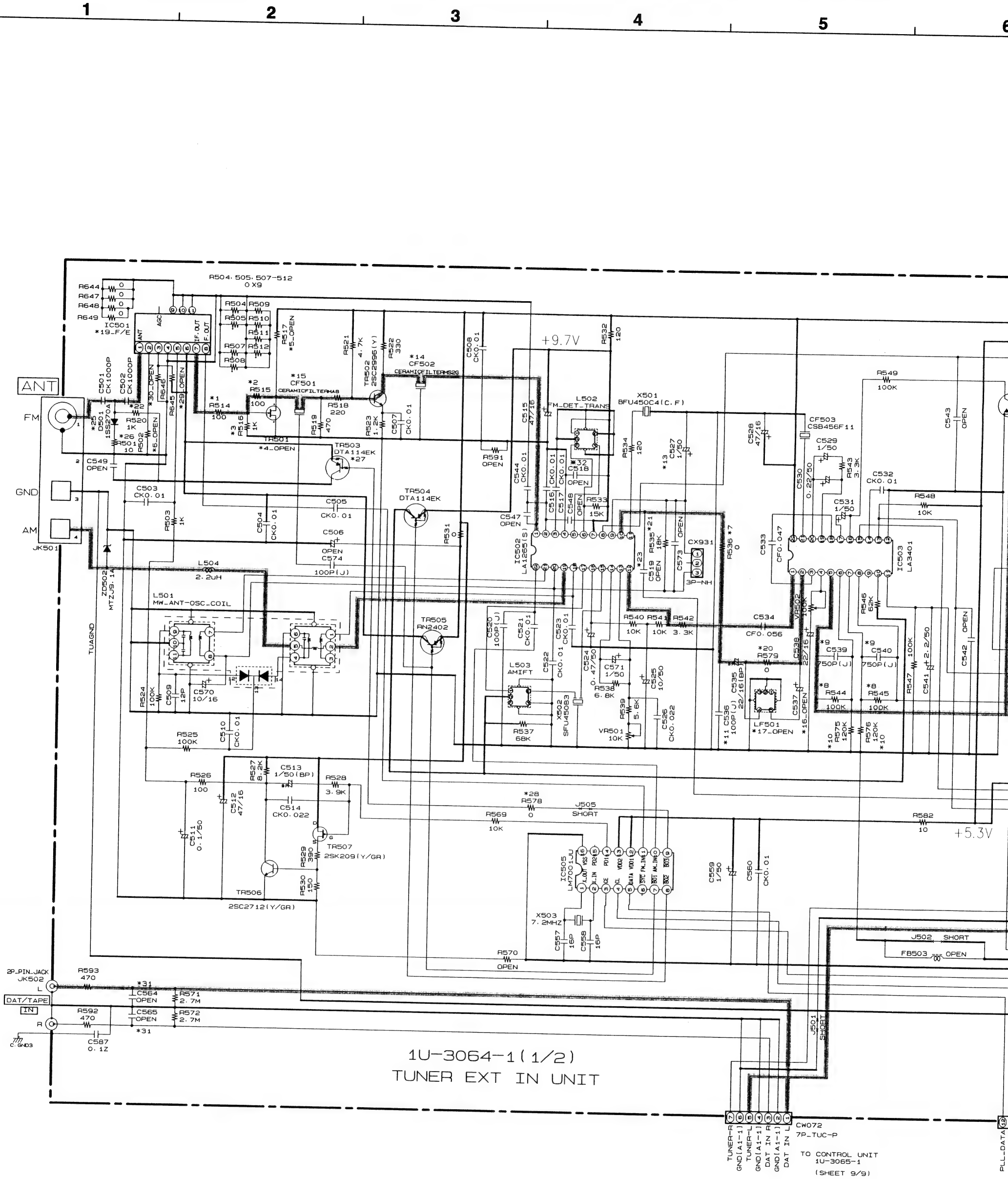
+B LINE
-B LINE
SIGNAL LINE

**WARNING:**
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

**CAUTION:**
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is detective.

**WARNING:**
DO NOT return the unit to the customer unit the problem is located and corrected.

## SCHEMATIC DIAGRAM (3/9)




1U-3064-1(1/2)
TUNER EXT IN UNIT

**NOTICE**

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

**WARNING:**

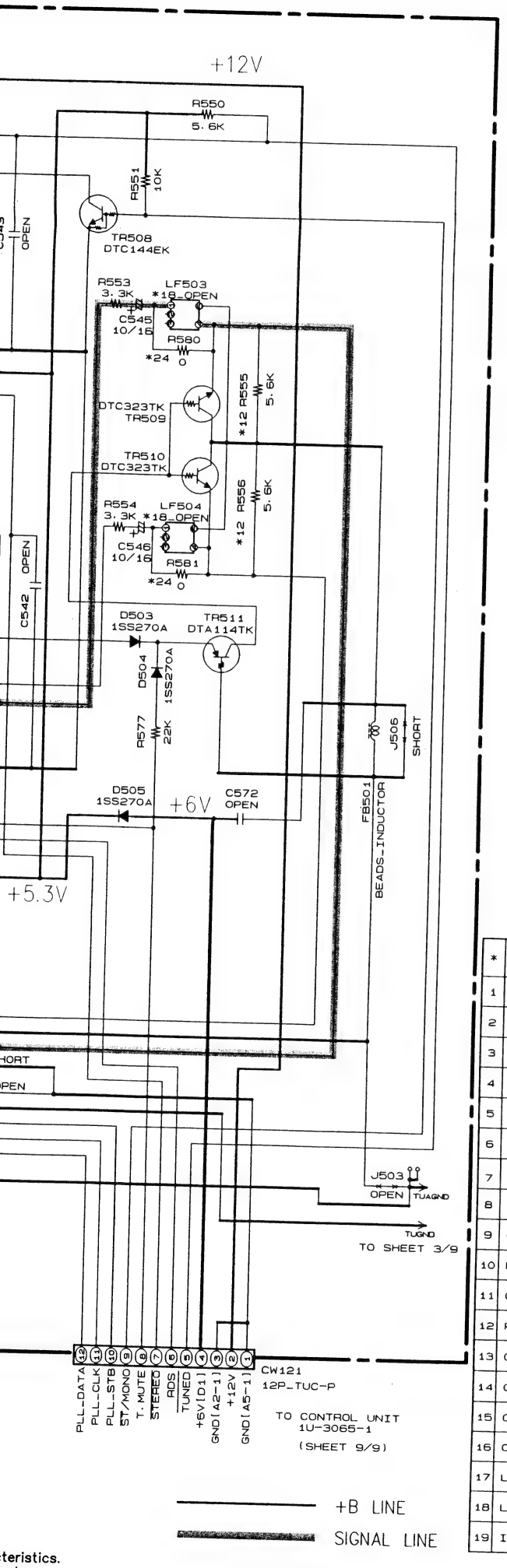
Parts marked with this symbol ⚠ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

**CAUTION:**

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the current exceeds 0.5 milliamps, or if the resistance from chassis to either of the power cord is less than 240 kohms, the unit is detective.

**WARNING:**

DO NOT return the unit to the customer unit the problem is located and corrected.




| * | NO | * USA | TAIWAN | ASIA | EUROPE | JAPAN |
|---|---|---|---|---|---|---|
| 1 | R514 | 100 | | | 100 | 0 |
| 2 | R515 | 100 | | | --- | 100 |
| 3 | R516 | 1K | | | 330 | 330 |
| 4 | TR501 | --- | | | 2SK211[GR] | --- |
| 5 | R517 | --- | | | 330 | --- |
| 6 | R502 | --- | | | 0 | --- |
| 7 | R536 | 0 | | | 2.7K | 0 |
| 8 | R544, 545 | 100K | | | 150K | 100K |
| 9 | C539, 540 | 750p | 510P | | 330P | 510p |
| 10 | R575, 576 | 120K | | | 200K | 120K |
| 11 | C536 | 100p | | | --- | --- |
| 12 | R555, 556 | 5.6K | | | 3.3K | 5.6K |
| 13 | C527 | 1/50 | 0.33/50 | | 0.33/50 | 0.33/50 |
| 14 | CF502 | SFE 10.7MS2G | | | SFT 10.7MS2 | SFE 10.7MS2G |
| 15 | CF501 | SFE 10.7MA8 | | | SFT 10.7MS2 | SFE 10.7MA8 |
| 16 | C537 | --- | | | 22/16 | --- |
| 17 | LF501 | --- | | | ANTI BIRDIE FILTER | --- |
| 18 | LF503, 504 | --- | | | LPF 2320085004 | LPF 2320085004 |
| 19 | IC501 | F/E 2160102008 | | | F/E 2169013004 | F/E 2169012005 |

| * | NO | * USA | TAIWAN | ASIA | EUROPE | JAPAN |
|---|---|---|---|---|---|---|
| 20 | R579 | 0 | | | --- | 0 |
| 21 | R535 | 18K | 39K | | 39K | 18K |
| 22 | R520 | 1K | | | 1K | --- |
| 23 | C519 | --- | | | CK100p | --- |
| 24 | R580, 581 | 0 | | | --- | --- |
| 25 | D501 | 1SS270A | | | 1SS270A | --- |
| 26 | R501 | 10 | | | 10 | --- |
| 27 | TR503 | DTA114EK | | | DTA114EK | --- |
| 28 | R578 | 0 | | | 0 | --- |
| 29 | R645 | --- | | | 10K | --- |
| 30 | R646 | --- | | | 5.6K | --- |
| 31 | C564, 565 | --- | | | 330P | --- |
| 32 | C518 | --- | | | 270P | --- |
| | | | | | | |
| | | | | | | |

teristics.
acturer.

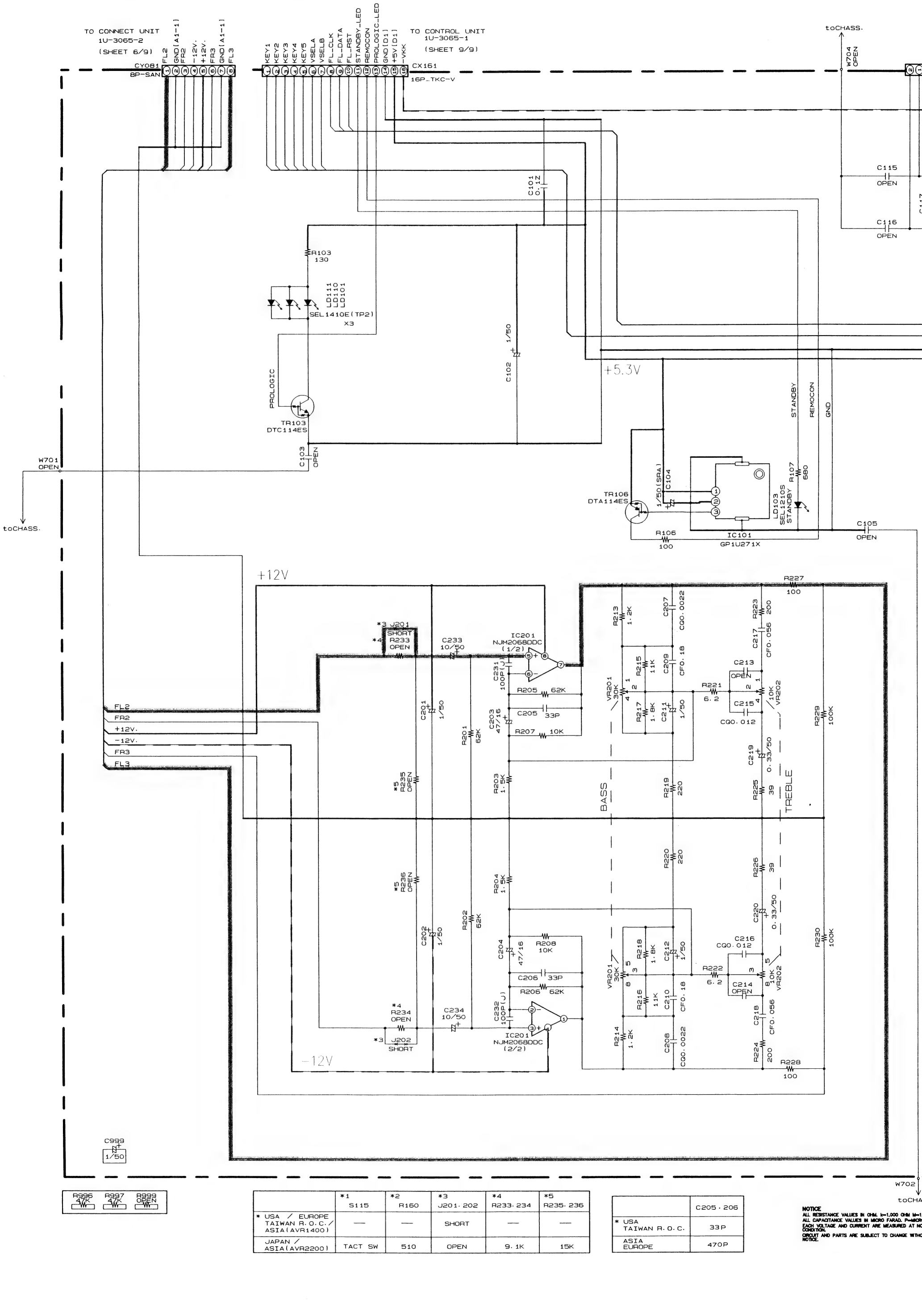
u make either (1) a
check. If the leakage
chassis to either side
etective.

is located and

## SCHEMATIC DIAGRAM (4/9)

# SCHEMATIC DIAGRAM (5/9)

1 2 3 4 5 6

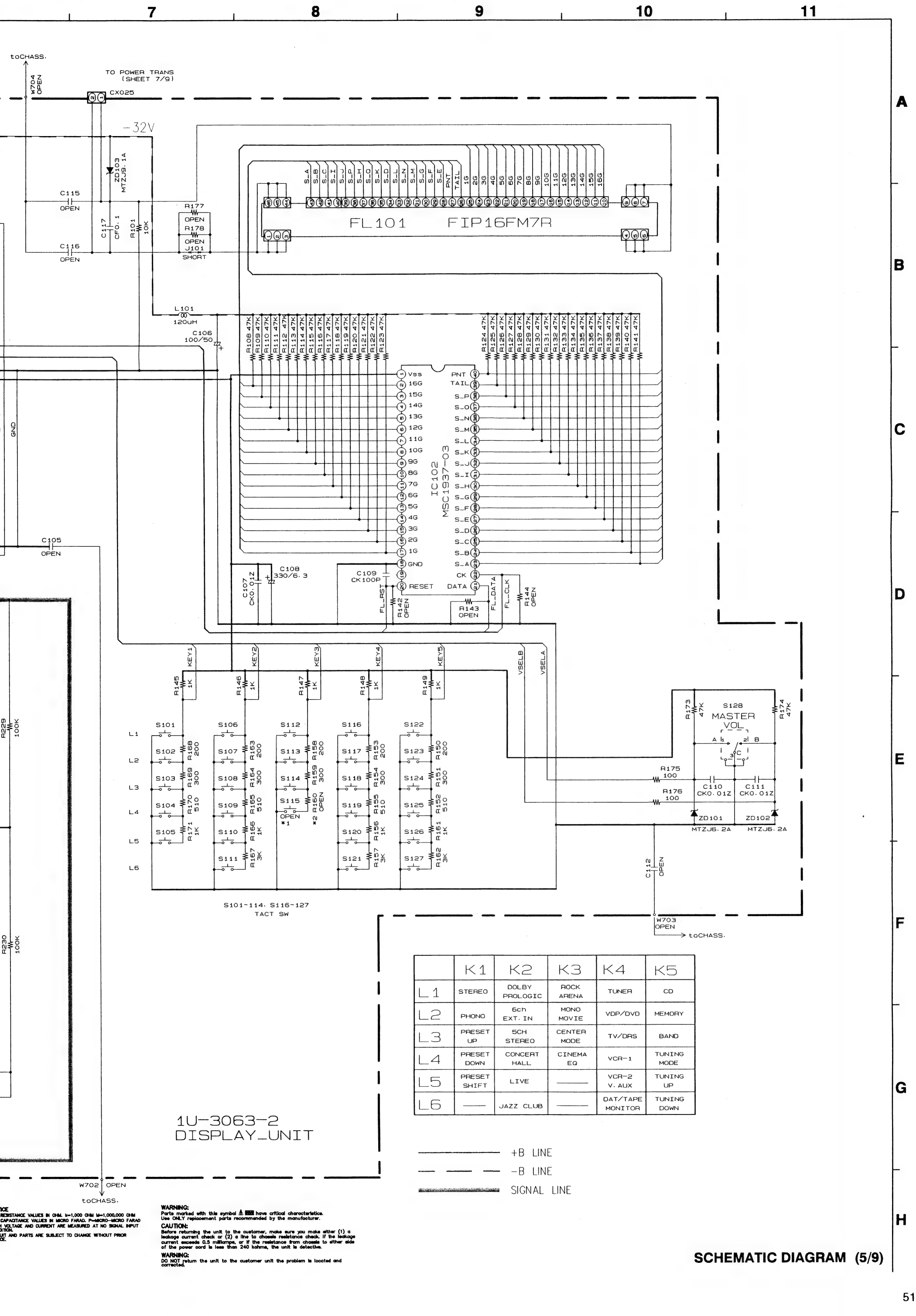



R996 47K R997 47K R999 OPEN

| | *1 S115 | *2 R160 | *3 J201·202 | *4 R233·234 | *5 R235·236 |
|---|---|---|---|---|---|
| * USA / EUROPE TAIWAN R.O.C./ ASIA(AVR1400) | — | — | SHORT | — | — |
| JAPAN / ASIA(AVR2200) | TACT SW | 510 | OPEN | 9.1K | 15K |

| | C205·206 |
|---|---|
| * USA TAIWAN R.O.C. | 33P |
| ASIA EUROPE | 470P |

NOTICE
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1.
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICR
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO
CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHO
NOTICE.




| | K1 | K2 | K3 | K4 | K5 |
|---|---|---|---|---|---|
| L1 | STEREO | DOLBY PROLOGIC | ROCK ARENA | TUNER | CD |
| L2 | PHONO | 6ch EXT. IN | MONO MOVIE | VDP/DVD | MEMORY |
| L3 | PRESET UP | 5CH STEREO | CENTER MODE | TV/DRS | BAND |
| L4 | PRESET DOWN | CONCERT HALL | CINEMA EQ | VCR-1 | TUNING MODE |
| L5 | PRESET SHIFT | LIVE | ——— | VCR-2 V. AUX | TUNING UP |
| L6 | ——— | JAZZ CLUB | ——— | DAT/TAPE MONITOR | TUNING DOWN |

——————— +B LINE

— — — — -B LINE

▬▬▬▬▬▬ SIGNAL LINE

NCE
RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
V. VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT
ATION.
UT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR
CE.

**WARNING:**
Parts marked with this symbol ⚠ ▭ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

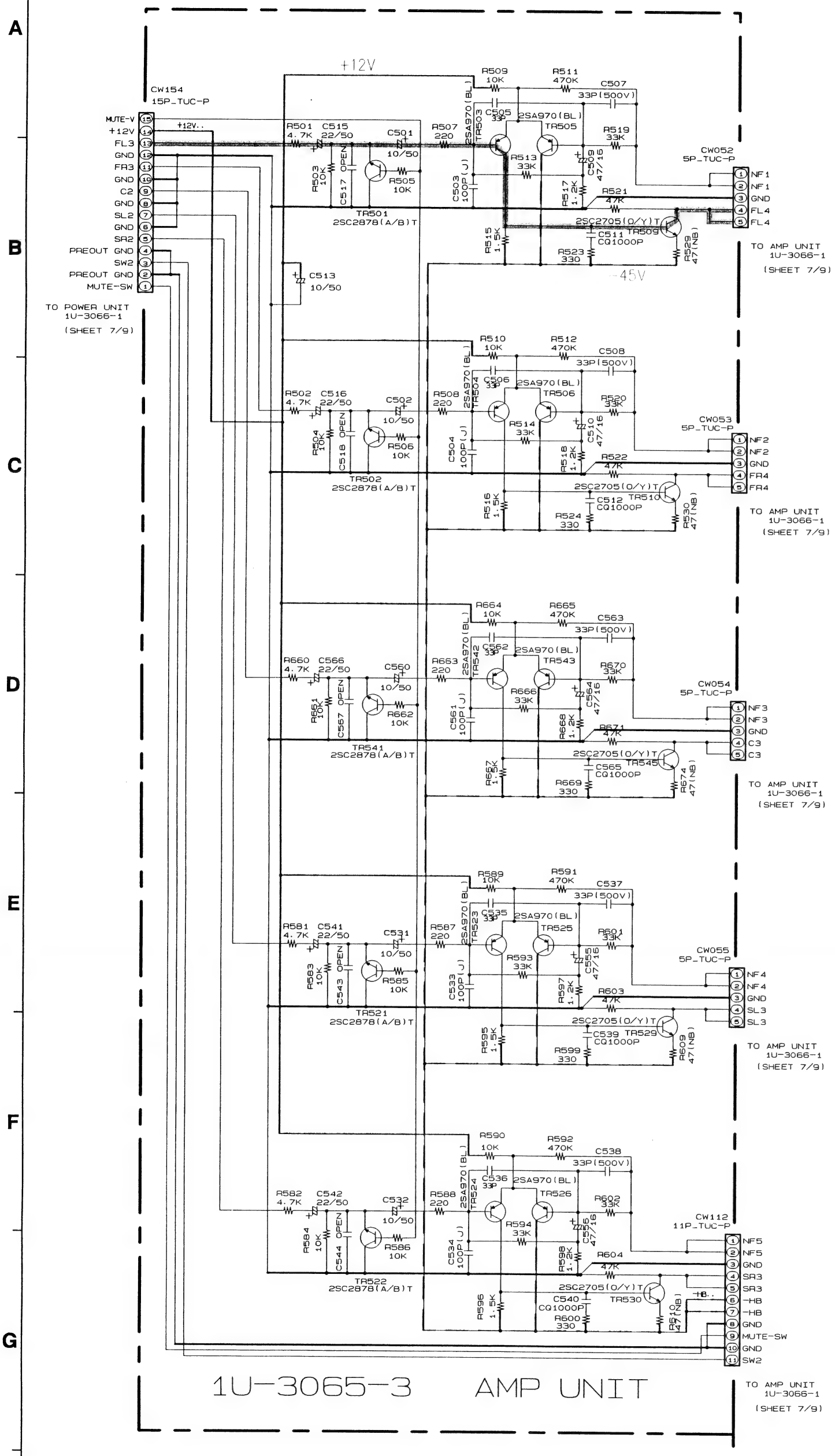
**CAUTION:**
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.

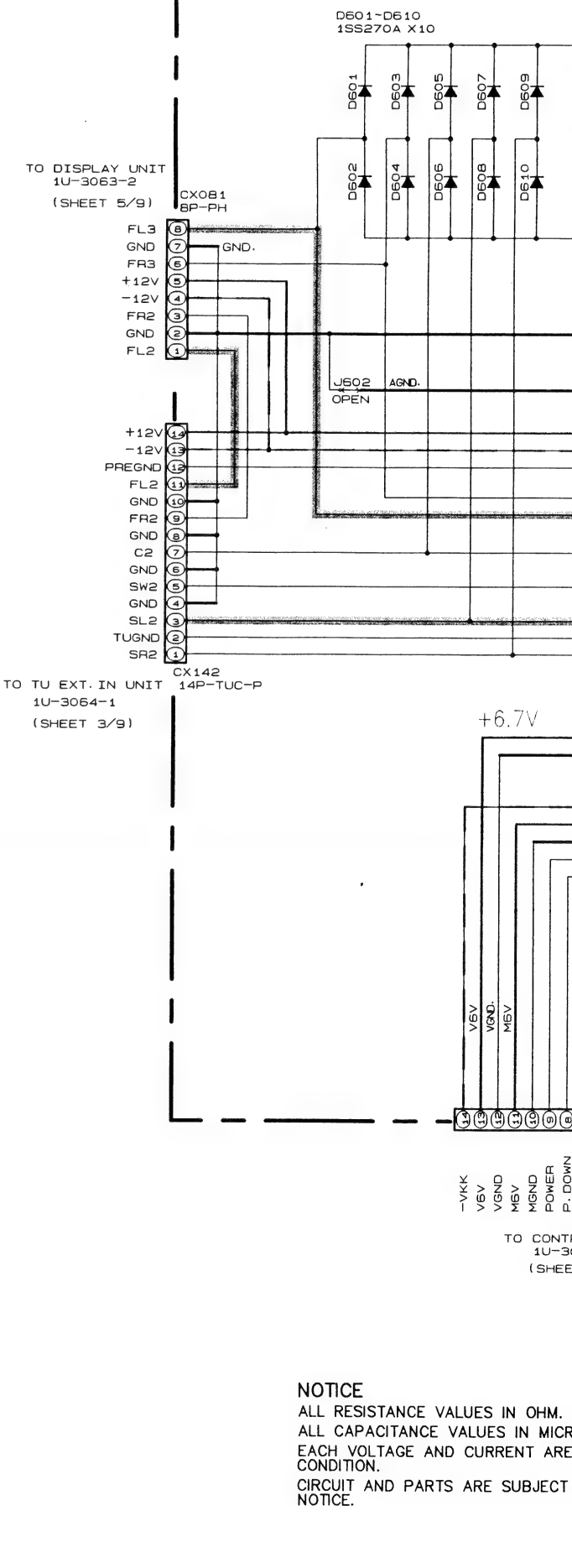
**WARNING:**
DO NOT return the unit to the customer unit the problem is located and corrected.

## SCHEMATIC DIAGRAM (5/9)

# SCHEMATIC DIAGRAM (6/9)

| | C205,206 | C509,510 |
|---|---|---|
| USA<br>TAIWAN R.O.C | —— | 47/16 |
| ASIA | —— | 47/16 |
| EUROPE | 560p | 100/16 |




NOTICE

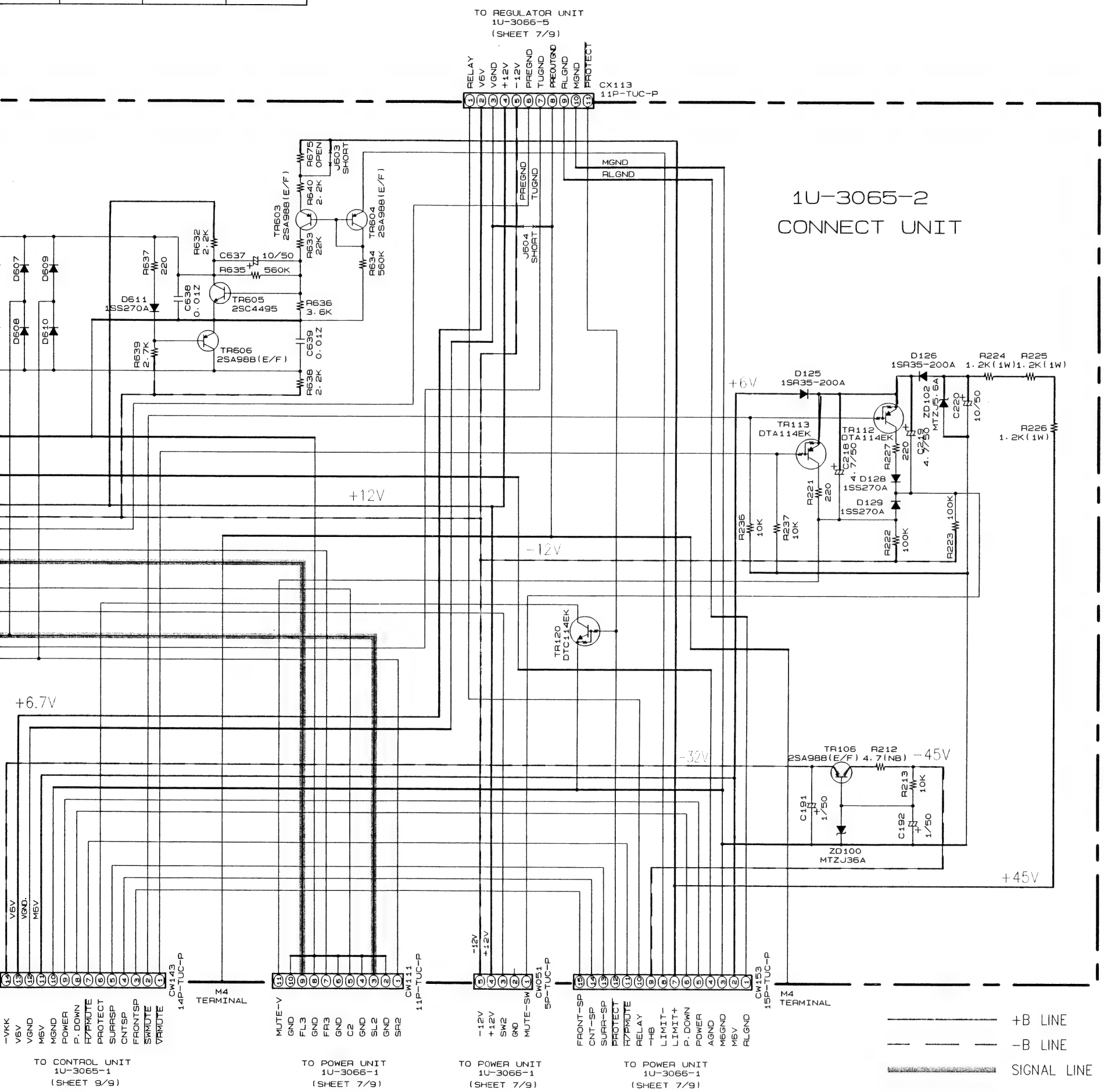
ALL RESISTANCE VALUES IN OHM.

ALL CAPACITANCE VALUES IN MICR

EACH VOLTAGE AND CURRENT ARE CONDITION.

CIRCUIT AND PARTS ARE SUBJECT NOTICE.

| C509,510 | C515,516 | C505,506 | C535,536,562 |
|---|---|---|---|
| 47/16 | 22/50 | 33p | 33p |
| 47/16 | 22/50 | 220p | 220p |
| 100/16 | 47/16 | 470p | 220p |




LUES IN OHM. k=1,000 OHM M=1,000,000 OHM
VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
CURRENT ARE MEASURED AT NO SIGNAL INPUT

ARE SUBJECT TO CHANGE WITHOUT PRIOR

**WARNING:**
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

**CAUTION:**
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is detective.

**WARNING:**
DO NOT return the unit to the customer unit the problem is located and corrected.

## SCHEMATIC DIAGRAM (6/9)

# SCHEMATIC DIAGRAM (7/9)

1 2 3 4 5 6

TO CONNECT UNIT 1U-3065-2 (SHEET 6/9)

CX154 15P_TUC_P: MUTE-V, GND, FL3, GND, FR3, GND, C2, GND, SL2, GND, SR2 / +12V, FL3, GND, FR3, GND, C2, GND, SL2, GND, SR2, SW2, GND, MUTE-SW

CX111 11P_TUC_P

TO AMP UNIT 1U-3065-3 (SHEET 6/9)

J516 OPEN

NC

CX051 5P_TUC_P: -12V, +12V, SW2, GND, MUTE_SW

CX052 5P_TUC_P: NF1, NF1, GND, FL4, FL4

CX053 5P_TUC_P: NF2, NF2, GND, FR4, FR4

CX054 5P_TUC_P: NF3, NF3, GND, C3, C3

CX055 5P_TUC_P: NF4, NF4, GND, SL3, SL3

CX112 11P_TUC_P: NF5, NF5, GND, SR3, SR3, -HB, -HB, GND, MUTE-SW, GND, SW2

J511 OPEN

J512 OPEN

J513 OPEN

J514 OPEN

J515 OPEN

C517 100P(500V)

R525 5.6K(1W)

C513 47/50

R527 5.6K(1W)

VR501 4.7

TR507 2SC1740S(S)

TR511 2SD2004(P/Q)

C503 OPEN

C515 10/100

R539 1(NB)

TR515 2SC3855(O/P/Y)

R550 10K

TP501 3P-H

R543 0.22(1W)

R547 0.22(1W)

R503 10K

R545 0.22(1W)

R549 0.22(1W)

R551 1K

C651 OPEN

R559 22K

R555 2K

TR519 2SC1841(E/F)

R553 39K

L501 1mH

R563 10

R567 OPEN

C521 CFO.1

R557 10(1W)

C523 OPEN

R561 SHORT

R565 OPEN

C525 OPEN

R535 1.6K

R537 330(NB)

R511 OPEN

C501 OPEN

C519 100P(500V)

TR513 2SB1328(P/Q)

R541 1(NB)

D501 1SS270A

TR517 2SA1491(O/P/Y)

C650 OPEN

C646 470/63

R571 10(1W)

C518 100P(500V)

R526 5.6K(1W)

C514 47/50

R528 5.6K(1W)

VR502 4.7

TR508 2SC1740S(S)

TR512 2SD2004(P/Q)

C504 OPEN

C516 10/100

R540 1(NB)

TR516 2SC3855(O/P/Y)

R552 1K

C653 OPEN

R560 22K

R502 10K

TP502 3P-H

R544 0.22(1W)

R548 0.22(1W)

R504 10K

R546 0.22(1W)

R556 2K

TR520 2SC1841(E/F)

R554 39K

R550 0.22(1W)

L502 1mH

R568 OPEN

R569 22K

R570 22K

C522 CFO.1

R564 10

R558 10(1W)

C524 OPEN

R562 SHORT

R566 OPEN

D502 1SS270A

TR518 2SA1491(O/P/Y)

R536 1.6K

R538 330(NB)

R512 OPEN

C502 OPEN

C520 100P(500V)

TR514 2SB1328(P/Q)

R542 1(NB)

C652 OPEN

R695 22K

C568 100P(500V)

R672 5.6K(1W)

C566 47/50

R673 5.6K(1W)

VR505 4.7

TR544 2SC1740S(S)

TR546 2SD2004(P/Q)

C510 OPEN

C567 10/100

R680 1(NB)

TR548 2SC3855(O/P/Y)

R686 1K

C655 OPEN

R689 22K

R509 10K

TP503 3P-H

R682 0.22(1W)

R684 0.22(1W)

R510 10K

R683 0.22(1W)

R685 0.22(1W)

R687 39K

R688 2K

TR550 2SC1841(E/F)

L505 1mH

R694 OPEN

C570 CFO.1

R690 10(1W)

C571 OPEN

R692 10

R691 SHORT

R693 OPEN

C572 OPEN

R677 1.6K

R679 330(NB)

R515 OPEN

C509 OPEN

C569 100P(500V)

TR547 2SB1328(P/Q)

R681 1(NB)

D505 1SS270A

TR549 2SA1491(O/P/Y)

C654 OPEN

C573 CKO.012

R696 10K

TR551 2SA9881(E/F)

R687 10K

C543 100P(500V)

R605 5.6K(1W)

C541 47/50

R607 5.6K(1W)

VR503 4.7

TR527 2SC1740S(S)

TR531 2SD2004(P/Q)

C507 OPEN

C545 10/100

R621 1(NB)

TR535 2SC3855(O/P/Y)

R633 1K

C657 OPEN

R651 22K

R505 10K

TP504 3P-H

R625 0.22(1W)

R629 0.22(1W)

R507 10K

R627 0.22(1W)

R631 0.22(1W)

R635 39K

R637 2K

TR539 2SC1841(E/F)

L503 1mH

R647 OPEN

C549 CFO.1

R643 10

R639 10(1W)

C551 OPEN

R641 SHORT

R645 OPEN

D503 1SS270A

TR537 2SA1491(O/P/Y)

R615 1.6K

R619 330(NB)

R513 OPEN

C505 OPEN

C547 100P(500V)

TR533 2SB1328(P/Q)

R623 1(NB)

C656 OPEN

C553 OPEN

R649 22K

C544 100P(500V)

R606 5.6K(1W)

C542 47/50

R608 5.6K(1W)

VR504 4.7

TR528 2SC1740S(S)

TR532 2SD2004(P/Q)

C508 OPEN

C546 10/100

R622 1(NB)

TR536 2SC3855(O/P/Y)

R634 1K

C659 OPEN

R652 22K

R506 10K

TP505 3P-H

R626 0.22(1W)

R630 0.22(1W)

R508 10K

R628 0.22(1W)

R632 0.22(1W)

R636 39K

R638 2K

TR540 2SC1841(E/F)

L504 1mH

R648 OPEN

C550 CFO.1

R640 10(1W)

C552 OPEN

R642 SHORT

R646 OPEN

C554 OPEN

R616 1.6K

R620 330(NB)

R514 OPEN

C506 OPEN

C548 100P(500V)

TR534 2SB1328(P/Q)

R624 1(NB)

D504 1SS270A

TR538 2SA1491(O/P/Y)

C658 OPEN

R650 22K

TO AMP UNIT 1U-3065-3 (SHEET 6/9)

TO CONNECT UNIT 1U-3065-2 (SHEET 6/9)

RELAY, V6V, VGND, +12V, -12V, PREGND, TUGND, PREOUTGND, RLGND, MGND, PROTECT

CW113 11P_TUC_P

J518 OPEN

+6.7V

C636 0.012

J517 OPEN

C582 0.12

R717 220K

R718 4.7K

R719 4.7

R762

C581 47/16

TR552 2SC3311A

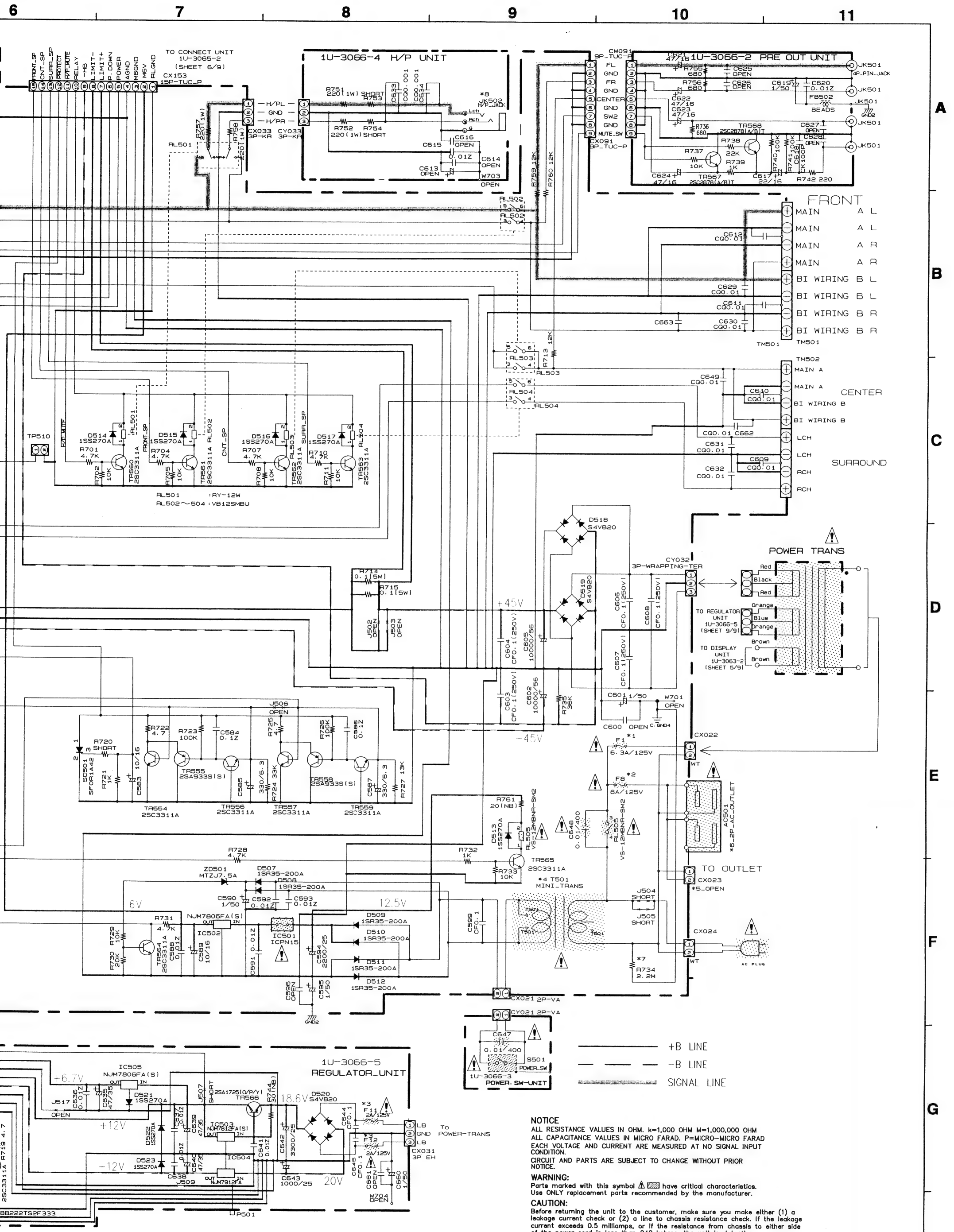
TH501 PTH9M04BB222TS2F333

TP510

SC501 SFOR1A42

1U-3066-1 POWER UNIT

| | *1 F1 | *2 F8 | *3 F503. F504 | *4 T501 | *5 CX023 | *6 AC601 | *7 R734 | *8 JK502 |
|---|---|---|---|---|---|---|---|---|
| * USA TAIWAN R.O.C. | 6.3A/125V 2061046001 | 8A/125V 2061046014 | 2A/125V 2061039063 | 2336073000 | —— | 2P AC OUTLET | 2.2M | N1 |
| ASIA | 2.5A/250V 2061015032 | 2.5A/250V 2061015032 | 2A/250V 2061015061 | 2336058009 | 2P VH | —— | —— | AU |
| EUROPE | 2.5A/250V 2061015032 | 2.5A/250V 2061015032 | 2A/250V 2061015061 | 2336058009 | 2P VH | —— | —— | N1 |
| JAPAN | | 8A/125V 2061052008 | | | —— | 2P AC OUTLET | —— | N1 |




**NOTICE**

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

**WARNING:**

Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

**CAUTION:**

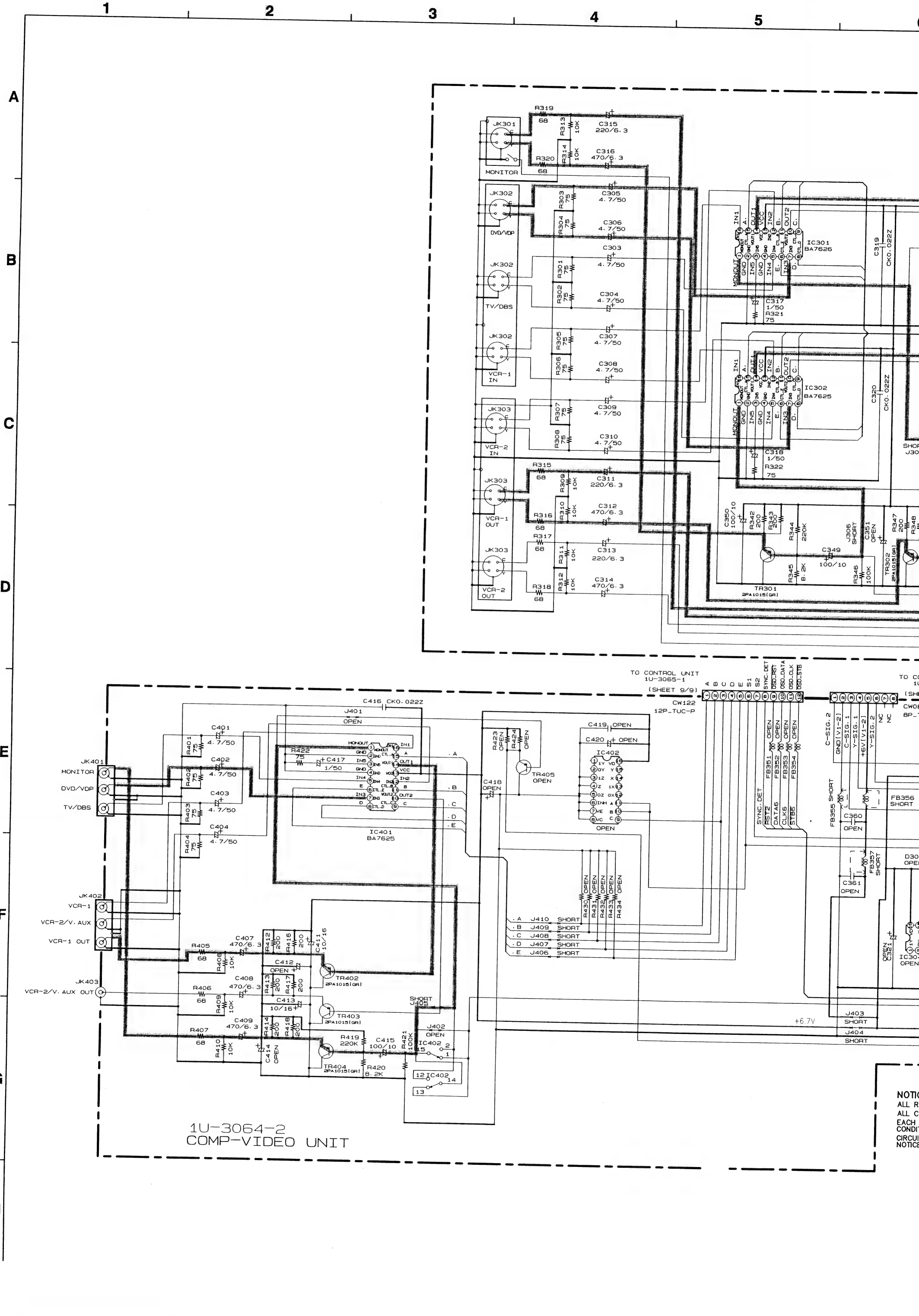
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is detective.

**WARNING:**

DO NOT return the unit to the customer unit the problem is located and corrected.

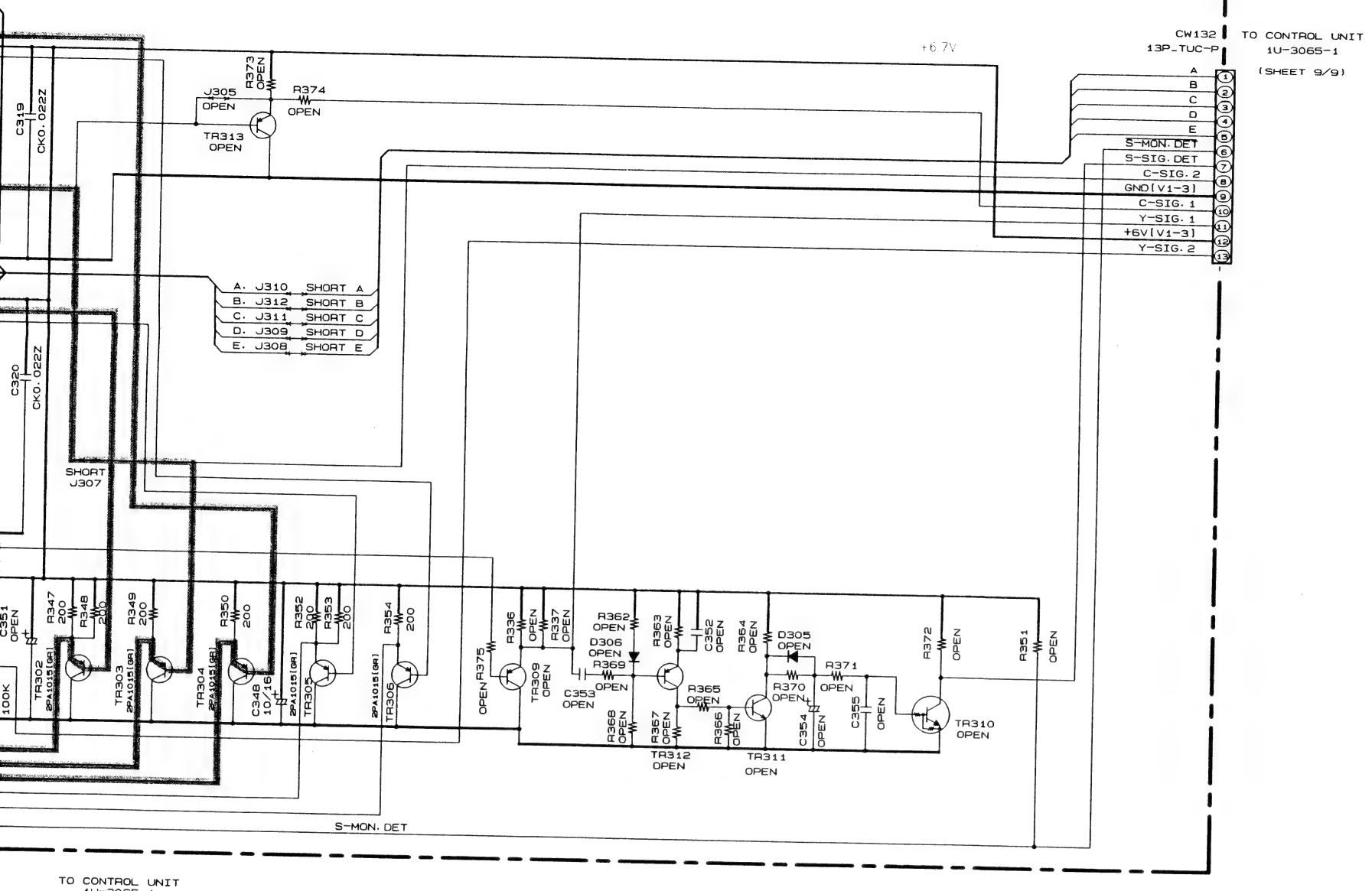
## SCHEMATIC DIAGRAM (7/9)

# SCHEMATIC DIAGRAM (8/9)



1U-3064-3
S-VIDEO UNIT

(AVR2200/2220 only)




**NOTICE**

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**WARNING:**

DO NOT return the unit to the customer unit the problem is located and corrected.

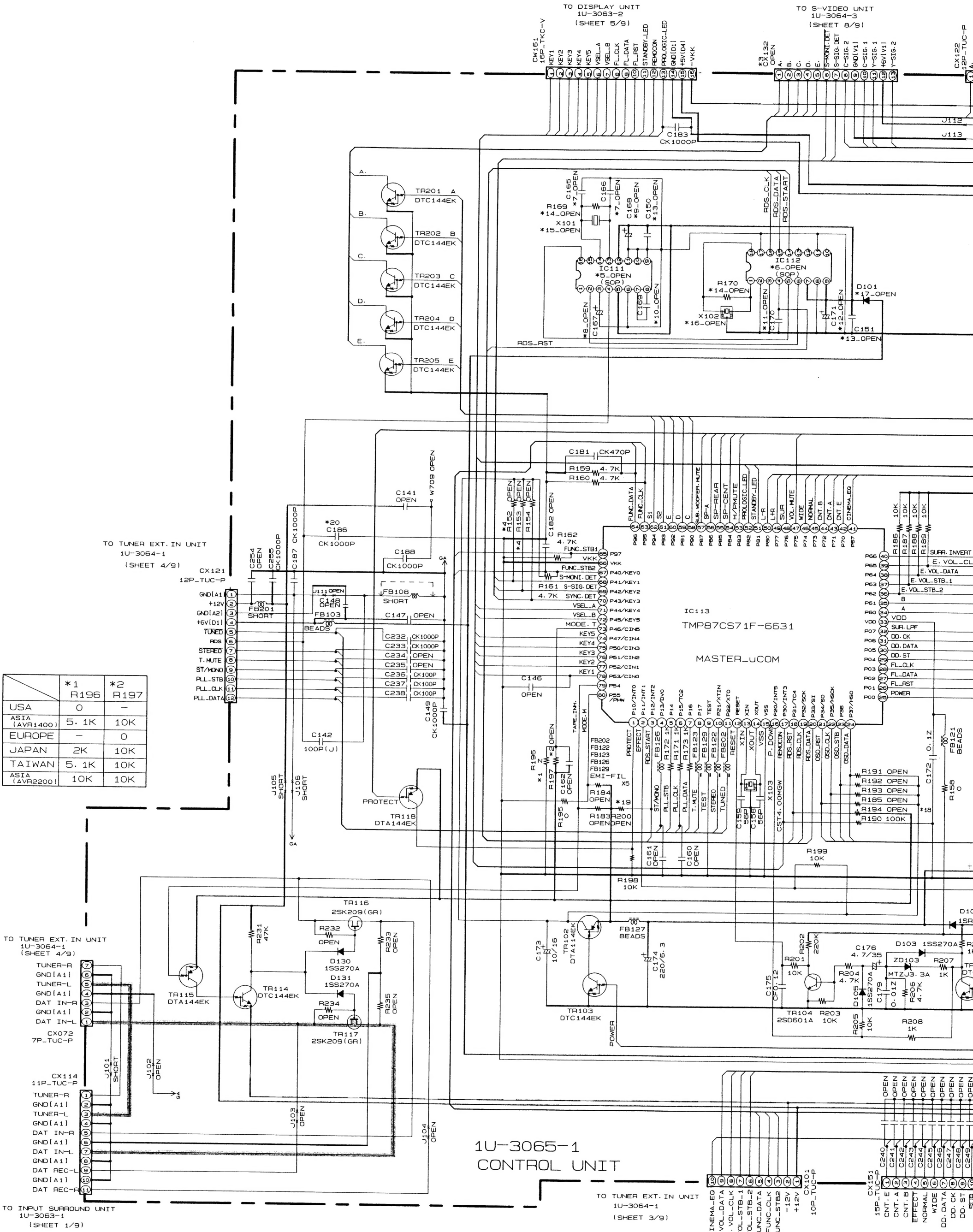
+B LINE

SIGNAL LINE

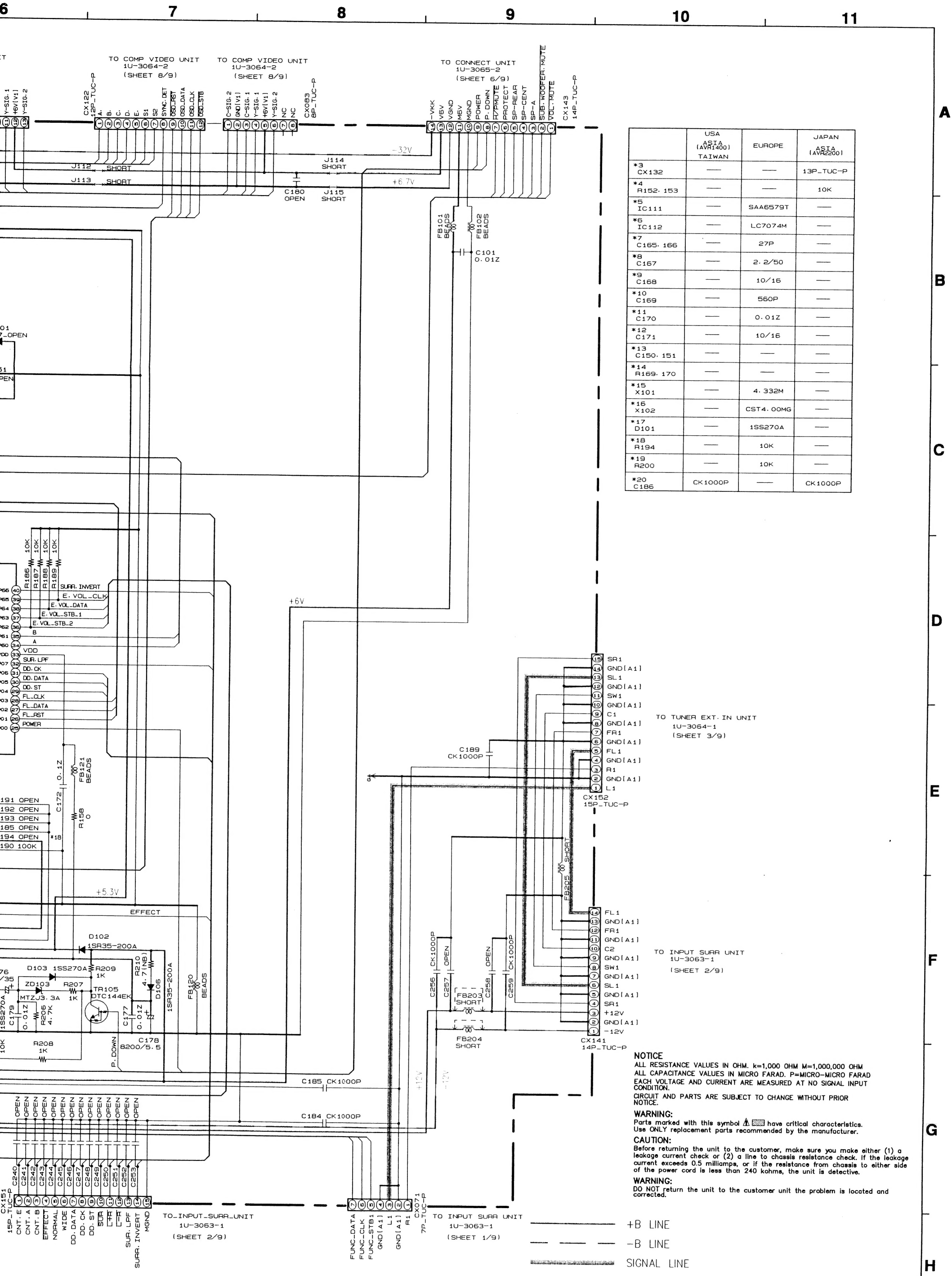
## SCHEMATIC DIAGRAM (8/9)

# SCHEMATIC DIAGRAM (9/9)

1 2 3 4 5 6




| | *1 R196 | *2 R197 |
|---|---|---|
| USA | 0 | – |
| ASIA (AVR1400) | 5.1K | 10K |
| EUROPE | – | 0 |
| JAPAN | 2K | 10K |
| TAIWAN | 5.1K | 10K |
| ASIA (AVR2200) | 10K | 10K |




| | USA ASIA (AVR1400) TAIWAN | EUROPE | JAPAN ASIA (AVR2200) |
|---|---|---|---|
| *3 CX132 | —— | —— | 13P_TUC-P |
| *4 R152.153 | —— | —— | 10K |
| *5 IC111 | —— | SAA6579T | —— |
| *6 IC112 | —— | LC7074M | —— |
| *7 C165.166 | —— | 27P | —— |
| *8 C167 | —— | 2.2/50 | —— |
| *9 C168 | —— | 10/16 | —— |
| *10 C169 | —— | 560P | —— |
| *11 C170 | —— | 0.01Z | —— |
| *12 C171 | —— | 10/16 | —— |
| *13 C150.151 | —— | —— | —— |
| *14 R169.170 | —— | —— | —— |
| *15 X101 | —— | 4.332M | —— |
| *16 X102 | —— | CST4.00MG | —— |
| *17 D101 | —— | 1SS270A | —— |
| *18 R194 | —— | 10K | —— |
| *19 R200 | —— | 10K | —— |
| *20 C186 | CK1000P | —— | CK1000P |

**NOTICE**

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CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

**WARNING:**

Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

**CAUTION:**

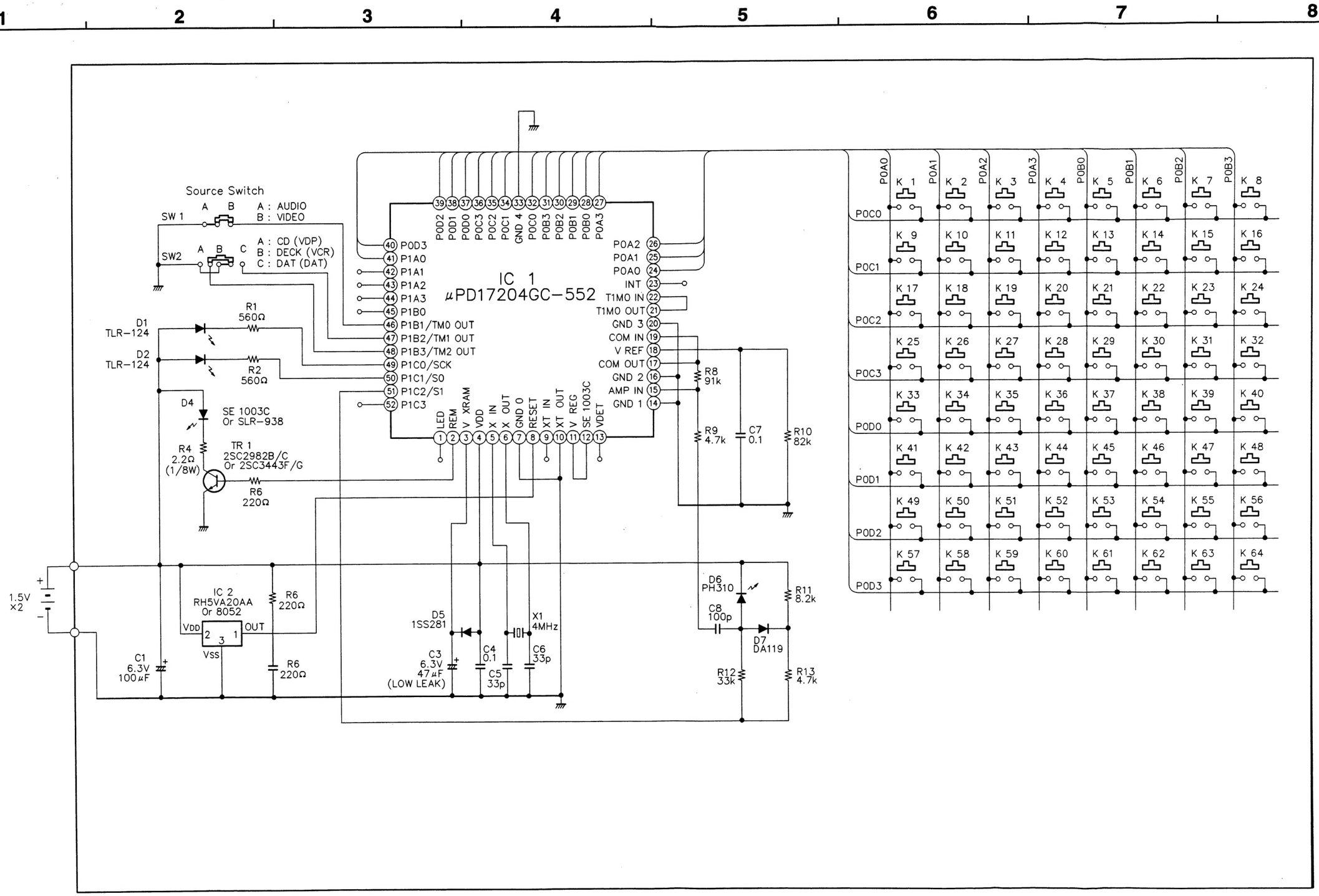
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is detective.

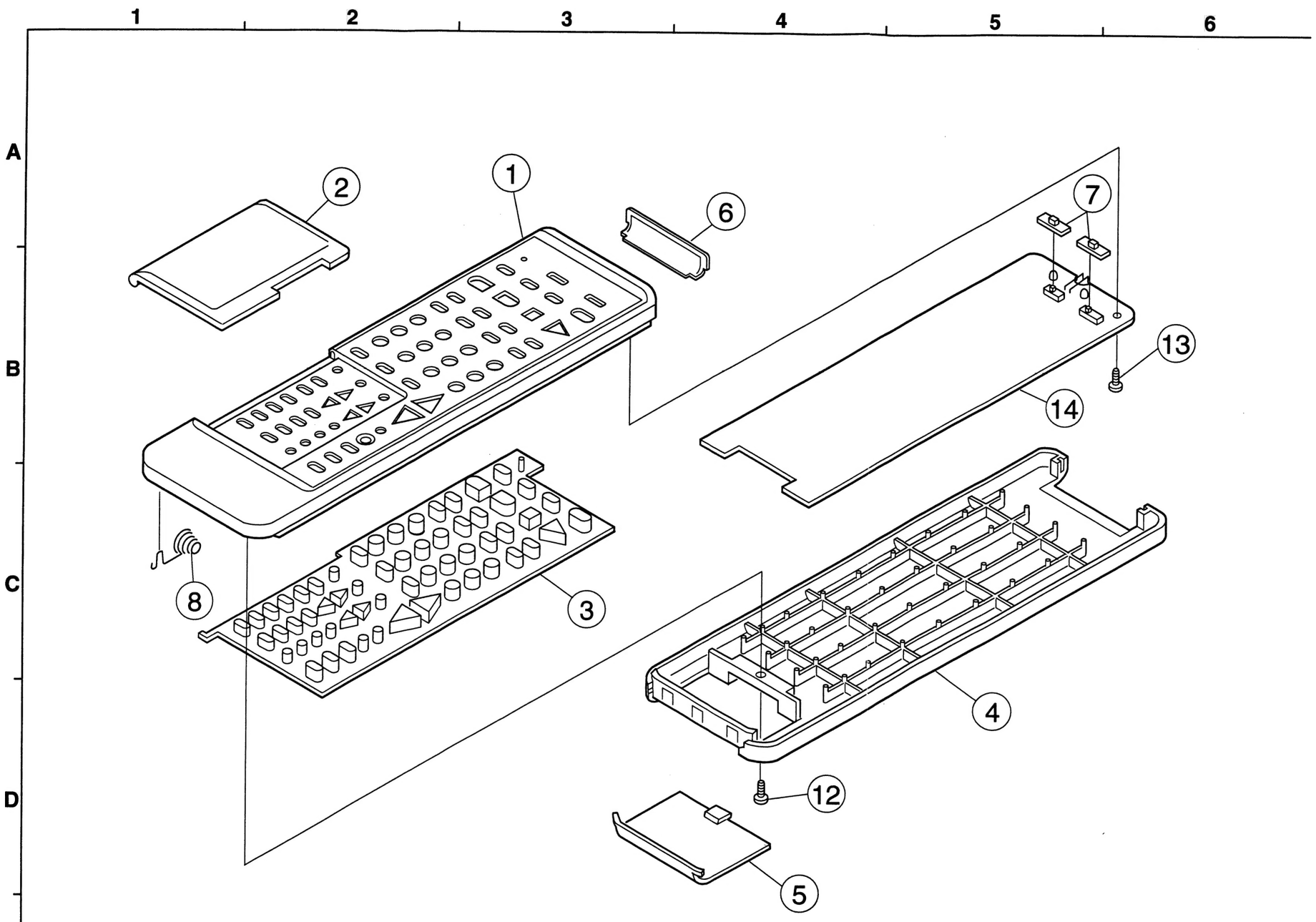
**WARNING:**

DO NOT return the unit to the customer unit the problem is located and corrected.

## SCHEMATIC DIAGRAM (9/9)

## REMOTE CONTROL UNIT (RC-832)






## PARTS LIST OF REMOTE CONTROL UNIT (RC-832)

| Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|---|---|---|---|---|
| ◉ 1 | 9H3 1000 170 | Top Case (RC832) Ass'y | | 1s |
| ◉ 2 | 9H3 1000 168 | Cover | | 1 |
| ◉ 3 | 9H3 1000 169 | Switch Rubber | | 1 |
| ◉ 4 | 9H3 1000 166 | Bottom Case | | 1 |
| ◉ 5 | 9H3 1000 167 | Battery Cover | | 1 |
| ◉ 6 | 9H3 1000 148 | Filter | | 1 |
| 7 | 9H3 1000 150 | Slide Knob | | 2 |
| 8 | 9H3 1000 152 | Coil Spring | | 1 |
| 9 | — | — | | |
| 10 | — | — | | |
| 11 | — | — | | |
| 12 | 9H3 1000 154 | Tapping Screw 2x6 | | 1 |
| 13 | 9H3 1000 107 | Tapping Screw 2x5 | | 1 |
| 14 | 9H3 1000 161 | Main P.W.B. Ass'y | | 1s |
| IC1 | 9H3 1000 162 | IC µPD17204GC-552 | µ-Com | 1 |
| IC2 | 9H3 1000 158 | IC RH5VA10AA | vol. Detector | 1 |
| Q1 | 9H3 1000 070 | Transistor 2SC2982 | Chip | 1 |
| D1,2 | 9H3 1000 028 | LED TLR124 | Visible-Red | 2 |
| D4 | 9H3 1000 131 | LED SE1003-C | Inflared | 1 |
| D5 | 9H3 1000 087 | Diode 1SS2B1 | | 1 |
| D6 | 9H3 1000 029 | Diode PH310 | Photo-PIN | 1 |
| D7 | 9H3 1000 071 | Diode DA119 | Chip | 1 |
| X1 | 9H3 1000 088 | Ceramic Resonator | KBR4, 0M50J3 | 1 |
| SW1 | 9H3 1000 089 | Slide Switch | | 1 |
| SW2 | 9H3 1000 074 | Slide Switch | | 1 |
| C1 | 254 4213 034 | Electrolytic 100µF/6.3V | CE04W0J101M | 1 |
| C3 | 254 4213 021 | Electrolytic 47µF/6.3V | CE04W0J470M | 1 |